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To The Massachusetts General Court:

PURSUANT TO THE AUTHORITY AND DIRECTION OF SECTION 2 OF CHAPTER 239 OF THE ACTS OF 1997, I HEREBY SUBMIT THE FOLLOWING INVESTIGATION AND STUDY RELATIVE TO THE SAFE DRIVER INSURANCE PLAN AND THE HIGH AUTO INSURANCE RATES IN THE COMMONWEALTH

Linda L. Ruthardt
Commissioner of Insurance

July 1, 1998

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I. SAFE DRIVER INSURANCE PLANS

Early Merit Rating Plans

Automobile insurance first came into existence in the United States in the late 1890's and early 1900's. Massachusetts in 1925[1] instituted the first state compulsory bodily injury liability automobile insurance system in the nation. The catalyst for this compulsory system was a large number of automobile bodily injury claims that overwhelmed the legal system of the day. Massachusetts held this unique distinction for the next thirty years before any other states responded in kind.

The economic crises of the 1930's and the Second World War overshadowed all other issues in the 1930's and 1940's. In 1953 Massachusetts instituted its first automobile insurance merit rating plan.[2] Under this initial merit rating plan the Registrar of Motor Vehicles was required to establish and administer a point system whereby points were assigned to operator records based upon motor vehicle violations and accidents. The Commissioner of Insurance (Commissioner) was required to fix and establish a schedule of premium surcharges or penalties and these surcharges were to be graded in accordance with the point totals. Additionally, the Commissioner was required to take the total surcharge income into consideration when fixing and establishing premium charges for compulsory bodily injury liability insurance.

These premium surcharges were required by the statute to be constant or flat across all rating territories. The Commissioner established $6 per point as the premium surcharge under this merit rating plan. This merit rating system only lasted for several years as the small number of insureds adversely impacted by the plan managed to effect the repeal of the merit rating plan by 1956.[3]

Although the reintroduction of another merit rating plan was not to take place until the 1970's the Legislature did authorize the Commissioner to establish classifications of risks based upon accident involvement in M.G.L. c.175, §113B.[4]

Merit Rating Plan of 1970

In 1970 the Legislature enacted Chapter 670 of the Acts of 1970. While this statute is more well known for the establishment of the first compulsory no-fault personal injury protection (PIP) coverage in the country, it also reestablished a mandatory merit rating plan to be based upon moving violation convictions and certain accidents. The statute created presumptions of reasonability for certain percentage surcharges and discounts (credits) in the absence of a finding by the Commissioner based upon data accumulated under the merit rating system. The experience period for this merit rating plan was limited to five years under the statute.

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[1] Chapter 346 of the Acts of 1925.
[2] Chapter 570 of the Acts of 1953.
[3] Chapter 646 of the Acts of 1956.
[4] Chapter 391 of the Acts of 1964.

Merit Rating Plan of 1976

During the 1970's several events took place which prompted more change in the Massachusetts automobile insurance market. First, the mandatory offer requirement was extended from compulsory coverages only to all coverages. Second, the Massachusetts automobile insurance underwriting experience of insurers during the economic recession of the 1970's was not favorable. Both of the above led to the enactment of a new competitive rating law, Chapter 266 of the Acts of 1976.[5]

Section 18 of this statute established a new merit rating plan. This new plan mandated flat dollar surcharges and a three-year experience period for surchargeable incidents based upon moving violations of motor vehicle laws and at-fault accidents. The Commissioner was required to establish a merit rating plan consistent with the requirements of this section. This plan was initially promulgated by the Commissioner in the 1976 Regulation 9-76 and revised through subsequent regulations. Section 1 of the same statute established the Merit Rating Board (MRB) within the Registry of Motor Vehicles (RMV) as the organization responsible for gathering and disseminating data on operator records relating to motor vehicle violations and accidents relative to the merit rating plan.

The pre-existing Board of Appeal on Motor Vehicle Liability Policies and Bonds (BOA) was given the additional duty by the statute of hearing operator appeals of the determination of fault in accidents relative to the merit rating plan. The BOA in Regulation BA 1-77 subsequently promulgated *Standards of Fault* for at-fault accidents.

This merit rating plan existed through the end of 1983. Under this plan the Commissioner determined an annual automobile insurance credit to be awarded operators with clean driving records. Surcharges were uniform or flat dollar amounts across territories and varied by type of incident. In 1983 incident surcharges varied from a low of $25 for the first minor traffic violation conviction to a high of $1000 for the third or subsequent Driving Under the Influence conviction. The credits were uniform across territories and were determined based upon the total surcharge dollars collected and the number of credit eligible operators. These credits ranged from a low of approximately $6 in 1978 to a high of approximately $20 in 1983. There was a general consensus that the magnitude of the dollar credits and surcharges during these years did not generally serve to provide great incentive toward safe driving.

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[5] It is important to note that open competition was implemented effective January 1, 1977, but was subsequently suspended months later due to the controversy created by large increases in cost to urban and inexperienced operators.

Safe Driver Insurance Plan (SDIP) OF 1984

Chapter 241 of the Acts of 1983[6] (An Act Further Regulating Motor Vehicle Insurance) deleted the reference to a merit rating plan and substituted the reference to a safe driver insurance plan. This statute required the Commissioner to "establish a safe driver insurance plan that equitably reflected the driving records of insureds." The associated adjustments of premiums were further required to reflect equality between the aggregate credits given and aggregate surcharges collected. In simple terms this meant that any such safe driver plan had to be revenue neutral, i.e., total credits must equal total surcharges under the plan.

The State Rating Bureau (SRB) within the Division of Insurance, the Attorney General (AG), and the insurance industry Massachusetts Automobile and Accident Prevention Bureau (MARB), the parties to the fix and establish private passenger automobile insurance rate hearings under M.G.L. c. 175, §113B[7], undertook a cooperative effort to develop a new safe driver insurance plan consistent with Chapter 241. This cooperative effort resulted in the MARB submission of a consensus proposal for a safe driver insurance plan with one technical point of difference[8] remaining between the AG and the MARB. (The SRB remained neutral on the disputed issue.)

The 1984 SDIP adopted by the Commissioner in his *Opinion, Findings, and Decision on 1984 Automobile Insurance Rates* contained the following elements:

1. three-year experience period for credits and surcharges.
2. $200 minimum threshold for at-fault accidents on or after 1/1/84 ($50 prior to 1/1/84).
3. unsafe driver points by incident type (minor traffic=1, major traffic[9]=4, minor at-fault accident=2, major at-fault accident (>$500)=3).
4. aging for all incident types except major traffic violations.
5. total surcharges varied from $50 (1 point) to $675 (more than 8 points) and were actuarially determined from MRB collected data.
6. each policy was eligible for a credit if no listed operator had unsafe driver points or surchargeable incidents in the three-year experience period, no principal operator had less than three years experience, and at least one operator had a valid Massachusetts drivers license.
7. credits and surcharges were balanced by class and territory, i.e., the expected surcharges paid by drivers from a particular rating class and territory went to fund credits for clean drivers from that same rate class and territory.

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[6] One of the major purposes of this Act was the reorganization of the residual market mechanism established under M.G.L. c. 175, §113H.

[7] The Massachusetts independent insurance agents' state association participation in the hearings is usually limited to the issue of agent commissions.

[8] The technical issue of dispute related to the issue of drivers who had no points, but were ineligible for SDIP credits.

[9] These include Vehicular Homicide, Driving Under the Influence, Driving after License Suspension, etc.

8. percentage credits were applied to the class/territory property damage liability manual rate and equaled 26% of the property damage liability manual rate subject to a maximum dollar credit of $40.

This new SDIP included larger credits and surcharges and was supposed to provide greater incentive for safe driving, greater credits for those insureds paying higher premiums, and credits and surcharges that remained in the same rating class and territory.

This plan encouraged consumers to select deductibles that would eliminate the risk of being surcharged for small claims, and also eliminate the administrative costs associated with adjusting small claims – especially first party ones as no deductible applies in a third party property damage claim. The idea, obviously, was to pass these savings on to all consumers by not having these costs included in the rates.

Interestingly, Chapter 239 of the Acts of 1997's Section 2 (2) appears to express the opposite goal – to encourage lower deductibles[10]. The idea of "first dollar coverage", as it is sometimes called, has been popular as a means of encouraging preventative medicine. The theory has been to keep out of pocket costs low at the time of a visit to a medical provider (such as a doctor). This approach, however, requires that the premiums must include sufficient funds to pay for the service. Given the overall tenor of the Act, (lower costs for the drivers with the lowest number of incidents), we must point out that we cannot support the idea of encouraging lower deductibles.

However, the second part of the same Section(2) can be approached independently. Current statute requires reporting damage in excess of $1000 to local police. Such reports could be affirmatively tracked at vehicle safety inspection time to assure that any vehicles so damaged either have been repaired or that the damage does not affect safety.

There is a related issue. We have heard of consumers offering to pay another for property damage repairs with the assumption that no claim will be made by either party. The goal is so that no incident that would result in a change in SDIP status would be reported. Under current law that consumer who makes such a payment takes on two risks. One, that they will be identified as having violated the statutory requirement to make a police report if the amount meets the reporting threshold. Two, that a party will later file a claim for personal injury. Insurers may decline to defend and/or pay such claims under the theory that the insured's failure to promptly notify its insurer of the accident violates the terms of the insurance contract.

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[10] There is already a motor vehicle inspection system in place with the necessary sanctions to prevent insureds from failing to repair damaged and potentially dangerous vehicles.

Safe Driver Insurance Plan (SDIP) 1985-89

The SDIP from 1985-88 contained the same basic elements as those listed above with some variation in the percentage and maximum credit and the dollar surcharges by point total. The credits increased from a low of 26% with a maximum of $40 to a high of 44% and a maximum of $80 in 1988. Surcharges over the same period increased from a maximum of $675 in 1984 to a maximum of $900 in 1988 for the more than eight points category.

In 1984 a clause was inserted in the fiscal year 1985 budget authorization statute for the MRB that stated, "notwithstanding any general or special law to the contrary, no safe driver insurance plan shall require payment of an unsafe driver point surcharge for the first offense for non-criminal, motor vehicle traffic violations...". This clause has subsequently been referred to as the Buell Amendment. It prohibits the assignment of surcharge points for the first non-criminal minor traffic violation in the five-year experience period. For example, an insured who has one speeding ticket on his/her record can't be assigned surcharge points under this law. The Buell Amendment in effect gives an insured "one free bite of the apple" and severely reduces the amount of surcharge income that would otherwise be raised by these incidents. One additional impact of this amendment is the restricting effect that this amendment has on changes to the SDIP. The net result is that violations of law are occasionally excused, but not accidents. There has been concern expressed that a one-car accident (such as bumping into a tree or ones' own garage) always affects the record as long as the damage results in payment in excess of the deductible large enough to be surchargeable (currently $500).

One major consensus methodological change which was incorporated for the first time with the 1986 SDIP was the incorporation of a reconciliation process to true up past SDIP results in terms of the balance between credits and surcharges. Because the credits and surcharges are balanced in the manual rates prospectively, the ultimate actual balance of credits and surcharges for past year SDIPs may result in an actual surplus or deficit. This reconciliation process trues up all past year SDIPs and makes flat or single premium adjustments to the prospective manual rates for property damage liability and collision coverages. A reconciliation process has been included in all SDIPs since 1986.

Over the 1984-88 period one major criticism of the SDIP from drivers who had remained incident free for many years was the failure of the SDIP to give greater credits to these drivers than to those who had remained incident free for only three years. There was an attempt to address this in the 1989 SDIP. The 1989 SDIP established three categories of credits that included 3 year, 4 year, and 5 year credits. These credits were capped percentage credits again off the property damage liability manual rate with credits of 50% with maximum of $90, 60% with maximum of $100, and 65% with maximum of $120 respectively. Some surcharges categories were again increased with the 8 or more points surcharge category increased to $1,100.

Safe Driver Insurance Plan (SDIP) 1990

Further problems developed in the Massachusetts automobile insurance market during the 1980's. Poor underwriting results, residual market (C.A.R.) assessment rules, and an insurer perception of rate inadequacy led to the placement of two-thirds of the total private passenger market in the residual market and the withdrawal from Massachusetts of a number of nationally known insurance companies. State law required that these insurers stop writing all insurance lines of business in Massachusetts which disrupted both the personal and commercial lines markets.

The above problems led to the enactment of Chapter 273 of the Acts of 1988. Many of the changes contained in Chapter 273 are beyond the scope of this report, but the major changes included an increase in the tort threshold to $2000; an increase in the PIP limit to $8000 with automobile insurance primary in the $0-$2000 layer of coverage, (a compromise reached to help contain costs in employer medical and short term disability benefit plans); a change in the nature of underinsured motorist coverage; and the introduction of the direct payment system for damage to vehicles, (but not including glass only claims). Section 38 of this Act modified the SDIP to allow greater credits for longer clean driving periods and conversely eliminated the restriction of a three-year experience period for surcharges. This statutory change led the way to the establishment of a new structure for the 1990 SDIP.

Some of the issues which had arisen during the 1984-89 period relative to SDIPs included percentage credit that varies by territory versus flat dollar credit that is constant statewide, credit with cap versus credit with no cap, larger credits for longer clean driving periods, immediate reinforcement for good or bad driving (year to year movement), and credits for inexperienced drivers with 0-3 years of experience. One of the concerns that in the past had tempered consideration of larger credits for longer clean periods of operation was the restriction on the three-year period for surcharges. If no change was made in the length of the surcharge period, then the real credits available to credit eligible drivers were limited. Increasing the surcharge amounts would not in itself generate enough income to provide a significant increase in credits given the limited number of drivers receiving surcharges. The Buell Amendment continued to limit the possibilities for credits during this period.

In looking ahead to the 1990 SDIP the SRB, MARB[11], and the AG undertook a cooperative review of the SDIP in 1989 to address the many issues described above and remain in compliance with SDIP statutory mandates. The parties examined different types of credits (flat versus percentage), credit caps versus no caps, surcharge points assigned to at-fault accidents and motor vehicle violations, length of experience period, balance of SDIP, transitional impact of changes to 1989 SDIP, etc. These rigorous

[11] The MARB changed its name to the Automobile Insurers Bureau of Massachusetts (AIB) in 1990.

actuarial and statistical investigations and analyses culminated in the joint filing on the 1990 SDIP.[12]

The 1990 SDIP proposed by the parties was based upon the Bonus-Malus or ladder type safe driver plans that were common in Europe at the time. Bonus-Malus systems were thought to provide significantly greater incentives for safe driving than our 1989 type of SDIP. Under this type of plan a new driver or driver with no known experience enters the system at an entry step or ladder rung and moves down the ladder one step or rung to lower rates for each clean year of driving and up the ladder one or more steps to higher rates for each year with incidents. This type of system is intended to have movement down or up the ladder each year. At the time of this proposal there were five years of SDIP data available from the Merit Rating Bureau. The initial experience period for the 1990 SDIP was proposed to be both six years for credits and surcharges with the idea that the experience period would expand to ten or fifteen years in the coming years as more data became available. Thus the initial step range was chosen with steps 9-35[13] to accommodate future expansion without the need for constant renumbering of steps.

Because of the increase in the experience period for surcharges there was some concern by the parties that some insureds who had not received a credit in 1989, but who expected to receive a credit in 1990 under the 1984-89 type plans, would not receive a credit in 1990 under the expanded surcharge period. There was an additional concern that lengthy surcharge periods would encourage insureds who had poor driving experience in the past (i.e., high surcharge point totals) to operate their vehicles without insurance. Given one step down for one clean year, then an insured with a total of twenty points or step 35 would never get back to a low step level until all the incidents were no longer in the experience period. In order to deal with these issues a *Five-Year Clean Slate Rule* was included in the joint proposal. The Commissioner of Insurance ultimately included an additional three-year clean slate rule that satisfied both of the above issues in the 1990 SDIP.

The 1990 SDIP adopted by the Commissioner in his *Opinion, Findings, and Decision on 1990 Automobile Insurance Rates* contained the following elements:

1. A six-year experience period for credits and surcharges.
2. A$200 minimum threshold for minor at-fault accidents and $1,500 for major at-fault accidents.
3. Unsafe driver points by incident type (minor traffic=2, major traffic=5, minor at-fault accident=3, major at-fault accident=4.)
4. No aging for any incidents.

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[12] *Filing of the Attorney General, The Massachusetts Automobile Rating and Accident Prevention Bureau and the State Rating Bureau Relating to the Safe Driver Insurance Plan*, July 28, 1989.

[13] Step 15 was the entry level step so that fifteen years of clean experience would take you to step 0.

5. A three-year clean slate rule where an insured goes to no higher than step 14 after three consecutive clean driving years in the experience period and a five-year clean slate incentive where an insured goes to no higher than step 15 after five clean years.
6. Credits and surcharges balanced by class and territory, i.e., the expected surcharges paid by drivers from a particular rating class and territory fund credits for credit eligible drivers from that same rate class and territory.
7. Percentage credits and surcharges applied to class/territory compulsory bodily injury liability, personal injury protection, property damage liability and optional collision coverage manual rates with no dollar caps. Used 7% for the compulsory coverages and 5% for collision coverage as the percentage by step for both credits and surcharges. The total percentage was applied to the manual or step 15 rate.
8. No credit given for out-of-state experience.

Safe Driver Insurance Plan (SDIP) 1991

As had occurred with past changes in merit rating and SDIP plans, the implementation of the 1990 SDIP generated complaints from those insureds who were negatively impacted by the changes in the SDIP from 1989 to 1990. These complaints led to enactment of Chapter 171 of the Acts of 1990. Chapter 171 mandated two major changes to the 1991 SDIP relative to the 1990 SDIP. These are as follows:

1. The experience period was set at 5 years for surcharges; and
2. The SDIP had to include consideration of out-of-state driving experience.

The limitation of the surcharge period to five years had several immediate effects on the 1991 and subsequent SDIPs. It made no sense from an actuarial perspective to increase the experience period for credits beyond the current six years for an expansion of the credit experience period because holding the surcharge experience period constant would only diminish the real value of most credits. Secondly, the freeze on the experience period had the unanticipated effect of insureds remaining at the same step for as many as six years. The out-of-state driving experience requirement served to decrease the total surcharge income and increase the number of drivers at the larger credit steps without providing verification of the out-of-state driving experience.[14]

Two additional results of Chapter 171 were rebates for those insureds surcharged in the sixth experience year in 1990 and elimination of the *expired registration sticker* motor vehicle violation from the SDIP.

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[14] An insured with out-of-state experience is not required to provide evidence of their out-of-state driving record. Verification was found to be unfeasible as different out-of-state jurisdictions keep different levels of operator information. Almost all jurisdictions retain less operator information that Massachusetts.

Safe Driver Insurance Plan (SDIP) 1992-98

The basic structure of the SDIP remained constant from 1992-98. Each year the percentage step differentials are actuarially reviewed to determine the optimal step differentials. The current step differentials are 7% for the three SDIP compulsory coverages and 6% for the optional collision coverage. An analysis of the points to be assigned to different motor vehicle violations is undertaken every couple of years. Thus both the percentage step differentials and the points assigned to motor vehicle violations are examined on a regular basis for optimality. The minor and major at-fault thresholds were increased from $200 to $500 and from $1,500 to $2,000 respectively for accidents on or after January 1, 1995 in order to reflect the impact of inflation on small claims. The clean slate rule was set according to the three-year rule for 1992-98 SDIPs.

DOI/MRB SDIP Task Force (Task Force)

At the end of 1995 the Commissioner requested that the Massachusetts Division of Insurance (DOI) and the MRB undertake a review of the SDIP with the following goals and objectives:

1. make the SDIP more user friendly;
2. make the SDIP more efficient by utilizing new technologies; and
3. encourage safe driving by increasing public awareness and education.

The Task Force produced a report in August 1996 that providing a list of potential action items and a list of recommendations. It is important to note that the recommendations produced by the Task Force had not been subjected to the same rigorous actuarial, legal, and public policy review that changes to the SDIP require during the M.G.L. c. 175, §113B fix and establish rate hearings. The Task Force's report notes this, and clearly indicates that no changes should take place until further study is completed that indicates that the suggested changes can be effected within the current statutes. The issues raised by the Task Force have provided ideas raised at the fix and establish hearings, and some of the proposed changes were litigated in the rate setting process for 1998. Some are likely to be litigated in any rate setting process for 1999. The consideration of both the SRB and the AG has included a desire to not make change that effectively takes away from the safest drivers currently receiving maximum credits in order to eliminate complaints from others with SDIP incidents on their driving records.

SDIP Proposals Contained in the Auto Rate Filings for 1999

The SRB and the AIB recently filed 1999 SDIP proposals with the Commissioner as part of the hearings on 1999 private passenger automobile insurance rates. The AIB proposal would raise the minor at-fault accident threshold from $500 to $750. According to the AIB filing this proposal would result in an increase of 1% on the manual rates for the three compulsory coverages and the collision coverage affected by the SDIP.

The SRB proposal would change the way credit points are given for clean experience years so that more credit would be given for recent years and less credit for older years. The session for public comment on changes to the SDIP took place on Thursday, June 29, 1998.

Additional evidentiary public hearing sessions on the SRB and AIB SDIP proposals remain to be scheduled.

Recommendations for the Safe Driver Insurance Plan

The suggested changes include:

A. Repeal the statutory restrictions on the SDIP added by amendment including the Buell Amendment, (which effectively gives everyone an opportunity to have a moving violation once every 6 years without receiving a surcharge); length of the experience period (which limits recognition of incident-free years so that 20 years of no incidents is valued the same as 6 years); and actuarial requirements for credits and surcharges. All of these limit and/or reduce the amount of credit possible for good drivers; so that one may consider changes to

1. eliminate situations where insureds remain at the same step for years at a time in spite of additional clean driving years; and
2. examine the length of time that incidents remain on an individual operator's record.

B. Consider re-naming the plan, as "safe driver" is a term that has been found confusing since there is no accounting for at-fault accidents without property damage and some of the surchargeable events (appropriately) relate to the safety of the equipment (e.g., lapsed safety inspection stickers), rather than the driving skills of the person. The purpose of renaming would be to help consumers understand that the plan reflects more than just drivers' skills--that it is supposed to help contain costs by encouraging compliance to laws and maintenance of vehicles, and eliminating the cost of administering minor claims by encouraging the appropriate use of deductibles.

C. Encourage higher deductibles through increased education. (Note, because agents' commissions are tied to premium levels, it may be necessary to require a reward system to encourage sales of higher deductibles for insurers who are not direct writers. Statutory and/or regulatory change would be required in order to change the compensation/reward system in this way.)

It is vital that any changes to the system take consideration of the "zero sum game" nature of changes to the SDIP. This means that any action that decreases the total amount of surcharge income will decrease the amount of income available for credits and necessarily increase the total premium for many credit eligible insureds[15]. The challenge for change to the SDIP is to minimize the impact of premium increases and the number of safe drivers to be adversely impacted by such change. Legislative amendments have effectively penalized the drivers with the better records (approximately 70% of all drivers are assigned to Steps 9 and 10) while responding to the complaints of others by adding requirements that limit the ability to expand the credits.

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[15] Approximately 60% of all insureds are at the lowest SDIP step 9. These insureds would have their net premiums increased if we decrease the amount of surcharges and therefore the amount of available credits.

II. MASSACHUSETTS AUTOMOBILE INSURANCE RATES

Competition & Fix-And-Establish

Massachusetts has a private passenger automobile rate system where the Commissioner sets the rates to be used by all insurers for all coverages[16]. The Commissioner has this authority to set the rates under M.G.L. c.175, §113B. However, the Commissioner is given this authority on annual basis, and only after a public hearing is held under M.G.L. c.175E, §5. The Commissioner must find that "with respect to any territory or to any kind, subdivision or class of insurance, competition is either (i) insufficient to assure that rates will not be excessive, or (ii) so conducted as to be destructive of competition or detrimental to the solvency of insurers…". The Commissioner has made this finding in each year since 1977.

The ratemaking standards in M.G.L. c.175, §113B require that rates be adequate and not excessive or unfairly discriminatory. These rates must be based upon certain types of evidence and actuarial support. The rating system must contain statutorily mandated elements such as territorial classifications, a safe driver plan, and senior citizen discounts.

Chapter 622 of the Acts of 1986 required the Commissioner in M.G.L. c.175, §113B to determine whether insurance companies utilize adequate programs to control costs and expenses based upon information filed by the AIB. If the Commissioner determines that filing is deficient or that the programs are inadequate, then the Commissioner can make an appropriate adjustment in the premium charges to reflect the inadequacy. In addition to the above cost containment adjustment, the Commissioner has since the 1970's adjusted company expenses in the rates each year to reflect the lack of competition and a competitive market's expected effect on limiting company expenses[17].

Many consumers, legislators, (and even insurance industry representatives), point to the lack of a competitive market as the key catalyst behind Massachusetts automobile insurance rates being higher than the national average. However, the actual accident experience of Massachusetts drivers and their insurance claims refute the fallacy of lack of competition as the singular, or even most important cause of the Massachusetts automobile insurance rates.

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[16] There are two types of private passenger automobile rate deviations where an insurer may deviate from the rates fixed-and-established by the Commissioner. The first type is a so called 113B deviation which requires a public hearing and approval by the Commissioner. The second type is a so called 193R group marketing deviation and requires approval by the Commissioner.

[17] The adjustment is known as the competition adjustment factor (CAF) and has been upheld by the Massachusetts Supreme Judicial Court (SJC) in a number of legal actions initiated by the insurance industry.

Massachusetts Compared to National Averages

In comparing automobile insurance rates from one state to another there are a number of factors that must be considered as contributing factors when drawing any conclusions from the comparison. These include but are not limited to accident frequency, type of tort system, compulsory versus non-compulsory insurance system, driver demographics, proportion of drivers in urban or metropolitan areas, the cost and age of the fleet of vehicles in use, the cost of medical care in the state, the wage and income levels of citizens in the state, the propensity of state citizens to sue (with the inherent friction costs), road conditions, traffic enforcement, the level of insurance fraud, etc.

A December 1993 publication by the National Association of Insurance Commissioners (NAIC), *Auto Insurance Database Report*[18], analyzed a number of the key factors described above on a state by state basis[19]. Massachusetts ranked 4th highest in the nation each year from 1989-91 in regard to combined fatal/non-fatal injury accident rates per 100 million miles driven. Over the same period Massachusetts ranked 49th or 50th in fatal accident rates per 100 million miles driven. Thus the main problem for Massachusetts is not the fatal accident, but the non-fatal accident.

Massachusetts average hospital room charges during the 1986-90 period ranked from 6th highest in the country in 1990 to 12th highest in the country in 1987-88. In both 1987 and 1992 Massachusetts had the 2nd highest rate of physicians per capita in the nation. Each year in the 1991-93 period Massachusetts ranked 3rd highest in the country in the number of attorneys per capita behind the District of Columbia, and New York. In 1987 Massachusetts ranked 2nd highest in the country in the percent of claimants represented by an attorney in personal injury claims.

Each year in the 1987-91 period Massachusetts ranked 4th highest in the country in population density (state population/square miles in state). It ranked 6th highest in the country in average annual pay in both 1989 and 1990. In the 1986-90 period Massachusetts ranked from 3rd to 5th highest in the country in per capita disposable personal income. Massachusetts has a compulsory automobile insurance system. All drivers, good and bad, are required to purchase insurance. The same publication showed that Massachusetts had an average automobile insurance expenditure[20] in 1987-1992 that was the 3rd, 3rd, 5th, 4th, 6th,and 5th highest in the nation respectively.

A January 1998 publication by the National Association of Insurance Commissioners (NAIC), *State Average Expenditures & Premiums for Personal Automobile Insurance in*

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[18] This publication was discontinued after 1993, but publication will resume in 1999.

[19] Various external sources were used such as the *Statistical Abstract of the United States*, Federal Highway Administration, American Medical Association, Insurance Information Institute, Automatic Data Processing (ADP), American Bar Association, U.S. Dept. of Commerce, etc.

[20] Average expenditure is defined as total written premiums divided by the number of vehicles on an annual basis.

1996, shows Massachusetts ranked 7th highest in the country in 1996 average automobile insurance expenditure. This 7th highest ranking includes a 6th highest ranking in liability average premium and a 25th and 27th highest ranking in collision and comprehensive average premium respectively. This same publication revealed that U.S. Bureau of Census data show 96.1% of the Massachusetts population living in metropolitan areas. Massachusetts also ranks among the higher states in the number of miles driven per mile of roadway.

An often used measure of automobile accident frequency is the frequency of automobile property damage liability claims. Accidents reported to state motor vehicle or law enforcement departments are not considered to be reliable indicators of accident frequency as most states have minimum dollar reporting thresholds where accidents below the threshold, e.g., below $1,000, are not required to be reported. It is not clear that all accidents for which an accident report are required to be filed are even filed. Additionally, accidents that occur outside the geographic boundaries of the home state are generally not captured by the home state motor vehicle database. An automobile property damage liability claim occurs whenever there is damage to another vehicle or property that is charged to a home state driver's policy. There is no deductible involved so that any dollar loss in that situation would be captured. These insurance data are generally subject to more rigorous reporting, editing, and auditing requirements than data reported to state motor vehicle records.

A review of the automobile property damage liability claim frequency for Massachusetts versus the nation shows that Massachusetts was number one in the country each year from 1986-90 in this measure of accident frequency. Massachusetts had an accident frequency that was almost twice the national average (181%, 194%, 184%, 181%, and 180% respectively) for each of these years. A review of more recent Massachusetts data from the AIB filing for 1998 private passenger automobile rates and countrywide data from the Fast Track Monitoring System shows that Massachusetts had an accident frequency that ranged from 176% to 164% times the countrywide average accident frequency over the 1992-96 period. **Thus a comparison of Massachusetts accident frequency versus the countrywide accident frequency over the most recent available ten year period shows Massachusetts to have in its best year approximately two-thirds more accidents than the countrywide average.**

Massachusetts is simply not "average". That does not mean, however, that there are not still opportunities that could be taken to further contain and/or lower costs for insurance. Some would require changes in the protections of the policy and how it operates. Others would not.

Recommendations Relative to Rate/Cost

The following recommendations are grouped into two categories. The first category includes suggested legislative changes. The second category requires continuing and/or strengthening current practices.

Suggested Legislative Changes

1. Provide a true No-Fault coverage to reduce the non-economic costs and waste in the present (pseudo) no-fault system. (This would include a verbal threshold that identifies egregious and/or serious levels of loss, or criminal conduct for there to be any opportunity for suit. It would also require a reasonably comprehensive benefit level to cover significant medical and other economic losses. The two components address the current problem generated by the low monetary threshold and assure that injured parties have appropriate levels of care and income replacement available to them. This could be accomplished through a Choice system, with a choice of a no-fault and a tort-based alternative, or one could replace the current system with a stand alone (true) No-fault system.
2. Institute a "no pay/no play" system so that those who drive without the mandatory insurance (and therefore are not paying for their share of the costs of administering a system which is effectively a tort system), are not eligible for any pain and suffering benefits.
3. Amend the current group marketing statute so as to encourage continued access to consumers, but on a logical, actuarially sound basis. The Administration has filed a bill to accomplish this.
4. Require mandatory breath test/start equipment for vehicles registered and/or regularly driven by those convicted of 'drunk' or 'impaired' driving.
5. Amend or abolish anti-rebating laws so that increased competition among producers (agents/brokers) may be possible.
6. Add glass repair to the direct pay system to help consumers take advantage of discounts that might be negotiated by insurers. (Recent statistics show that this is an area of repair where costs have been increasing at rates that are not in conformance with other states.)
7. Repeal the portion of the Seat Belt law that effectively exempts not wearing seatbelts from being surchargeable. (There are several reasons for this. A driver not belted in will have less ability to keep control of a vehicle once there is an impact, and unbelted passengers can become additional hazards. And, the medical losses to unbelted drivers and passengers add cost to the system.)

Strengthening Current Practices

8. Continue to improve the design and maintenance of roads and intersections.
9. Continue to improve consistency in the enforcement of traffic laws.
10. Continue to cut down on fraud by "rings" in the repair of motor vehicles (body work and glass).

11. Improve the level of detail for reporting motor vehicle accidents, so as to help in their investigation and minimize the ability to have "jump-in claimants" and/or staged-accidents succeed.

List of Exhibits

1. Example of SDIP Zero Sum Game Concept
2. State Motor Vehicle Records by State
3. Chapter 239 of the Acts of 1997
4. Chapter 570 of the Acts of 1953, §§5-17
5. Chapter 417 of the Acts of 1955
6. Chapter 646 of the Acts of 1956
7. Chapter 391 of the Acts of 1964
8. Chapter 670 of the Acts of 1970, §7
9. Chapter 266 of the Acts of 1976, §1 & §18
10. DOI Regulation 3-77
11. BOA Regulation BA 1-77
12. Chapter 241 of the Acts of 1983, §11
13. MARB 1984 SDIP Filing
14. Chapter 273 of the Acts of 1988, §38
15. AG/MARB/SRB 1990 SDIP Filing
16. Chapter 171 of the Acts of 1990
17. AIB 1997 Analysis of SDIP Incident Point Assignment
18. AIB 1997 Analysis of Percentage Step Differentials
19. 1996 Report of SDIP Task Force
20. Massachusetts 1986-90 Property Damage Liability Frequency Ranking
21. Fast Track Monitoring System-Massachusetts Property Damage Liability
22. Fast Track Monitoring System-Countrywide Property Damage Liability
23. AIB 1998 Main Rate Filing, Property Damage Liability Claims & Losses by Accident Year

Example of SDIP Zero Sum Game Concept

Suppose there are a total of 10 drivers in a certain driver class and territory. Let's assume that based upon the Commissioner's Rate Decision insurance companies would need to collect $100 per vehicle or $1,000 total for the 10 insureds if no safe driver insurance plan exists. Then under Massachusetts law the insurers would still need to collect an $1,000 total or an average of $100 per vehicle if there were a safe driver insurance plan in existence because Massachusetts Law requires that in any safe driver insurance plan the total surcharges equal total credits. If the total surcharges equal the total credits, then the net premium impact of surcharges and credits is zero, i.e., total surcharges and total credits cancel out each other. This means in simple terms that insurance companies are required by law to collect the same total premium amount whether there is a safe driver insurance plan or not.

It is often thought that changes can be made to the Massachusetts Safe Driver Insurance Plan which effect a relative few insureds in terms of safe driver step changes and these changes will not effect other insureds who experience no change in safe driver step. This is not true. When changes are made that effect the safe driver step of some insureds, the premium for all insureds will change.

Currently approximately 55% (1.9 million) of all Massachusetts insureds are rated at safe driver step 9. This means that 55% of all Massachusetts insureds have clean driving records in the most recent 6 year driving period. If changes are made to the current Massachusetts safe driver insurance plan which decrease the total amount of surcharges, then as a consequence these changes would cause the automobile insurance premium for these 1.9 million insureds to be higher than it would have been prior to the decrease in surcharges.

Conclusion

Any changes to the Massachusetts Safe Driver Insurance Plan must be considered in the light of how these changes impact the premiums of all insureds

Example of How Changes in The Massachusetts Safe Driver Insurance Plan Which Appear to Affect Relatively Few Insureds Actually Impact All Insureds

Situation I

Suppose the drivers in a certain driver class & territory are distributed at safe driver steps in the following way:

safe driver step	# of drivers
9	5
10	2
12	1
15	1
18	1

Next assume each safe driver step is worth a 7% step differential off the step 15 rate, then the individual step rates are as follows:

safe driver step	individual safe driver step premium	# of drivers	total safe driver step premium
9	80.56	5	$402.80
10	90.28	2	$180.56
12	109.72	1	$109.72
15	138.89	1	$138.89
18	168.06	1	$168.06
total			$1,000

Situation II

Let's suppose we decide to change the safe driver insurance plan so that certain minor at-fault accidents are no longer surchargeable & further that this causes the former step 18 driver to now be rated as a step 15 driver. Assume the other 9 drivers remain at their same step. Again assume a 7% step differential off the step 15 rate.

safe driver step	# of drivers
9	5
10	2
12	1
15	2
18	0

safe driver step	individual safe driver step premium	# of drivers	total safe driver step premium
9	82.98	5	$414.90
10	92.99	2	$185.98
12	113.02	1	$113.02
15	143.06	2	$286.12
18	173.10	0	$0.00
total			$1,000

Impact of Premium Change on All Drivers Due to Elimination of Certain Minor At-Fault Accidents

original safe driver step	original safe driver premium	revised safe driver premium	# of drivers	premium percentage change
9	80.56	82.98	5	3.0% (increase)
10	90.28	92.99	2	3.0% (increase)
12	109.72	113.02	1	3.0% (increase)
15	138.89	143.06	1	3.0% (increase)
18	168.06	143.06	1	-14.9% (decrease)

Data Captured by State Motor Vehicle Records by State
Source: The MVR Book Motor Services Guide, 1998 Edition

Name of State	Are All Reported Convictions Shown on MVR?	Number of Years Convictions Shown	Are All Reported Instate Accidents Shown on MVR?	Are Out-of-State Accidents Shown on MVR?	Are Accidents Designated as "At-Fault"?	Accident Reporting Dollar Threshold
AL	Yes	5 years	Yes	No	No	$250
AK	Yes except parking	Minor - 3 yrs; Major - 5yrs	not reported unless action taken	No	n/a	$500
AZ	No	39 months to 5 years	No	only if conviction occurs	n/a	$1,000
AR	No	3 years	not unless at-fault	Yes	Yes	$500
CA	Yes	varies from 3 yrs to 12 yrs	only if at-fault	Yes	Yes	$500
CO	Yes except parking, pedestrian, bicycle	up to 7 years	only if conviction	only if major conviction occurs	No	$1,000
CT	Yes	moving 3 yrs DUI 10 years	No	No	n/a	n/a
DE	all moving violation convictions	moving 3 yrs DUI 6 years	only if conviction	only if conviction	No	$500
DC	convictions with points	moving 3 yrs DWI indef.	only if conviction	Yes	No	$250
FL	Yes	10 years	only if citation issues	No	No	$500
GA	traffic convictions	3 to 7 years	only with conviction	only if conviction	No	$250
HI	Yes, except parking, misc., criminal, and contempt violations	moving 3 yrs DWI 10 years	only if citation issues	No	n/a	$3,000
ID	Yes ?	3 years	No	No	n/a	$750

Data Captured by State Motor Vehicle Records by State
Source: The MVR Book Motor Services Guide, 1998 Edition

Name of State	Are All Reported Convictions Shown on MVR?	Number of Years Convictions Shown	Are All Reported Instate Accidents Shown on MVR?	Are Out-of-State Accidents Shown on MVR?	Are Accidents Designated as "At-Fault"?	Accident Reporting Dollar Threshold
IL	Yes except non-moving violations	moving 4 yrs accidents 4-5 yrs DUI - life	Yes	No	No	$500
IN	Yes except non-moving violations	7 years	Yes	No	No	$750
IA	Yes	Mvg - 5-7 yrs DWI 12 yrs	all reportable accidents	No	No	$1,000
KS	No	3-5 yrs	Yes	No	No	$500
KY	Yes except non-moving violations	3 yrs	No	No	n/a	$200
LA	Yes except non-moving violations	Mvg - 3 yrs DWI 10 yrs	Yes	No	No	$500
ME	Yes	Mvg - 3 yrs DWI 10 yrs	Yes	No	No	$500
MD	Yes	Mvg - 3 yrs DWI 10 yrs	Yes	No	No	none, any injury or death
MA	SDIP	6 yrs	at-fault accidents	Yes	Yes	$500
MI	some speeding & non-moving violations excluded	Mvg 7 years OWI 10 yrs	only if driver is convicted of a traffic violation	No	No	$400
MN	Yes except non-moving violations	Mvg 5 yrs DWI up to indefinite	No	No	n/a	$1,000

Data Captured by State Motor Vehicle Records by State
Source: The MVR Book Motor Services Guide, 1998 Edition

Name of State	Are All Reported Convictions Shown on MVR?	Number of Years Convictions Shown	Are All Reported Instate Accidents Shown on MVR?	Are Out-of-State Accidents Shown on MVR?	Are Accidents Designated as "At-Fault"?	Accident Reporting Dollar Threshold
MS	Yes except non-moving violations	3 years	Yes	No	No	$100
MO	Yes except non-moving violations	mvg 5 yrs DWI - life	No	No	n/a	none, any damage, injury or death
MT	yes except seatbelt convictions	3 yrs	if damage is over $500 and conviction is rendered	Yes	No	$400
NE	Yes except non-moving violations	mvg 4 yrs DWI life	Yes	No	No	$500
NV	Yes except non-moving violations	3 years	No	No	No	$750
NH	Yes	Mvg - 5yrs DWI 7yrs	Yes	No	No	$1,000
NJ	Yes except non-moving violations	permanently but there is purge criteria	Yes	Yes	No	$500
NM	some speeding & non-moving violations excluded	Mvg 3 years DUI - perm.	No	No	n/a	$250

Data Captured by State Motor Vehicle Records by State
Source: The MVR Book Motor Services Guide, 1998 Edition

Name of State	Are All Reported Convictions Shown on MVR?	Number of Years Convictions Shown	Are All Reported Instate Accidents Shown on MVR?	Are Out-of-State Accidents Shown on MVR?	Are Accidents Designated as "At-Fault"?	Accident Reporting Dollar Threshold
NY	except equipment and non-moving violations	Mvg 3 years DWI - 10 yrs	Yes	No	No	$1,000
NC	Yes except non-moving violations	mvg - 5yrs DWI 10 yrs	Yes	No	No	$1,000
ND	No, only 3 point & higher violations	3 years	only if license is suspended	No	n/a	$1,000
OH	Yes	Mvg 5 yrs DWI 7 yrs	Only those reported by law officials	No	No	$400
OK	some speeding & non-moving violations excluded	3 years	only if citation issued and conviction	only with total record transfer	No	$300
OR	except parking and passenger violations	3 - 5 years	Yes	No	No	$1,000
PA	only those with points assigned	3 - 7 years	Yes	No	No	$0
RI	Yes	3 years	Yes	No	No	$500
SC	Yes except non-moving violations	10 years	Yes	No	No	$1,000
SD	some speeding violations excluded	3 years	Yes	Yes	No	$500
TN	Yes	3 - 7 years	Yes	No	No	$400

Data Captured by State Motor Vehicle Records by State
Source: The MVR Book Motor Services Guide, 1998 Edition

Name of State	Are All Reported Convictions Shown on MVR?	Number of Years Convictions Shown	Are All Reported Instate Accidents Shown on MVR?	Are Out-of-State Accidents Shown on MVR?	Are Accidents Designated as "At-Fault"?	Accident Reporting Dollar Threshold
TX	Yes except non-moving violations	mvg 5 yrs DWI indef.	only if citation issued and conviction	Yes	No	$500
UT	No	3 - 10 years	only if moving violation conviction	only if moving violation conviction	No	$1,000
VT	Yes	3- 15 years	Yes	No	No	$1,000
VA	Yes	3 - 11 years	Yes	No	No	$1,000
WA	Yes except non-moving violations	5 - 10 years	Yes	No	No	$500
WV	some speeding violations excluded	7 years	No	No	n/a	$250
WI	Yes	5 - 10 years	Yes	Yes	No	$1,000
WY	Yes	3 - 5 years	only if driver has no insurance	No	No	$500

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Chapter 239.

THE COMMONWEALTH OF MASSACHUSETTS

In the Year One Thousand Nine Hundred and Ninety-seven

AN ACT RELATIVE TO GROUP MARKETING PLANS FOR AUTOMOBILE AND HOMEOWNERS INSURANCE.

Whereas, The deferred operation of this act would tend to defeat its purpose, which is to waive forthwith the participation requirement for group marketing plans for calendar year 1998, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public convenience.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. A group marketing plan approved and in effect, pursuant to section 193R of chapter 175 of the General Laws, during calendar year 1997 may be approved upon renewal, notwithstanding that less than 35 per cent of its members are insured during calendar year 1998.

SECTION 2. The commissioner of insurance shall conduct an investigation and study relative to the safe driver insurance plan, specifically, and the high auto insurance rates in the commonwealth in general.

The investigation and study shall examine, and the commissioner shall submit, legislative recommendations based on, but not limited to, the following four principles:

(1) restructuring the safe driver insurance plan step-rating system so that credit step drivers are not penalized with high and lengthy premiums as a result of a minor accident or infraction;

(2) restructuring the safe driver insurance plan system to decrease the incidence of consumers purposefully increasing deductibles, avoiding filing damage claims and failing to repair a damaged and potentially dangerous vehicle;

(3) focusing the overall restructuring in a manner so as to provide fair and reasonable rates to consumers in the commonwealth and to lower Massachusetts' auto insurance premiums to the national average; and

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(4) the existence of high inherent costs within the commonwealth's auto insurance industry.

Said commissioner shall report its legislative recommendations to the general court on or before July 1, 1998.

House of Representatives, December 29, 1997.

Preamble adopted, , Speaker.

In Senate, December 29, 1997.

Preamble adopted, , President.

House of Representatives, December 29, 1997.

Bill passed to be enacted , Speaker.

In Senate, December 29, 1997.

Bill passed to be enacted, , President.

December 31, 1997.

Approved,

at 10 o'clock and 21 minutes, A. M.

Acting Governor.

Secretary of the Commonwealth

works, the commissioner of public safety, the commissioner of education, the chairman of the youth service board, the chairman of the metropolitan district commission, the commissioner of mental health, and three members to be appointed by the governor, one of whom shall be a representative of a safety organization. The governor shall be honorary chairman of the committee. The members appointed by the governor shall serve for a term of three years. The members of the committee shall receive no compensation for service on the committee. The committee shall have no power or authority except as specifically provided by law.

Assignment of personnel.

Section 2. The registrar of motor vehicles shall make available from his office such personnel as shall be necessary to carry out the functions of the committee. The committee shall be provided with suitable offices and equipment.

Expenditures.

Section 3. The committee may, subject to appropriation, expend such sums as may be necessary in carrying out its duties, including reasonable travel and expense of its members.

Duties of committee.

Section 4. It shall be the duty of the committee to hold meetings at least once during each calendar month, at such places as it may determine; to study the problem of safety in connection with the operation of motor vehicles; to consult and co-operate with all departments of state government in regard to highway safety; to promote and encourage uniform and effective programs of safety on highways and to assist in the co-ordination of such programs among state departments, local governmental agencies, other governmental agencies, and private organizations; to interchange information among the several departments of the state government for more effective highway safety conditions; to co-operate with officials of the United States government and with local governments toward the achievement of greater highway safety; to encourage highway safety education in the commonwealth; to encourage and assist in the creation of, and the programs of, local highway safety committees; and to make recommendations to the legislature with respect to the problem of highway safety. The committee shall establish a highway safety advisory council to participate with the committee in effecting, so far as and in such manner as the committee shall determine, its functions and responsibilities. Such council shall be composed of such organizations and individuals as the committee may, from time to time, designate.

MERIT RATING.

Point system for operation of motor vehicles, established.

Section 5. The registrar of motor vehicles shall, with the advice of the committee, fix and establish and thereafter administer a point system for the evaluation of the operating record of owners of registered motor vehicles and other persons to whom a license to operate motor vehicles has been granted under section eight of chapter ninety and for the determination of the continuing qualification of such persons for the rights and privileges granted by such motor vehicle registration or by such license to operate motor vehicles. Said system shall have as its basic element a graduated scale of points assigning relative values in accordance with the seriousness thereof to each of the matters relating to the operating record of such registrants and licensees which by law are required to be reported to the registrar or the reporting of which is provided for by law. Words used in this chapter which are defined in section one of chapter ninety shall have the same meaning as therein given, unless such construction is inconsistent with the manifest intent of this chapter.

Schedule for imposition of penalties, established.

Section 6. The registrar shall, with the advice of the committee, establish a schedule of the penalties to be imposed as a consequence of the accumulation of points charged against the operating records of said registrants and of said licensees, which schedule shall include, in such manner as he shall determine, warnings to such registrants and licensees, conferences with such registrants and licensees, and suspensions and revocations of motor vehicle registrations or operators' licenses. The registrar, with like advice, may from time to time make changes in said schedule of penalties. Nothing herein contained shall limit the authority of the registrar under chapter ninety to impose any penalty greater than those provided for in said schedule of penalties. The committee shall give appropriate publicity to the point system established under section five and the schedule of penalties established under this section.

Charging of points against operating records by registrar, regulated.

Section 7. On and after the date fixed by the committee as the effective date of the point system and of the schedule of penalties, the registrar, upon the receipt of any report required by law to be made to him or the reporting of which is provided for by law, shall charge the number of points indicated in the scale of points for the subject of such report against the operating record of the operator of the motor vehicle to which such report relates. If the operator is not the owner of the motor vehicle to which such report relates, and the motor vehicle was operated with the express or implied consent of the owner, the appropriate number of points indicated in the scale of points shall also be charged against the operating record of the owner of said motor vehicle, and for this purpose the registrar shall maintain an operating record for all owners of registered motor vehicles against whom points have been charged. Points charged against the operating record of a registrant or licensee shall not be admissible as evidence of negligence or for any other purpose in any proceeding at law or in equity.

Notice of charging of points, required.

Section 8. The registrar shall give notice to each registrant or licensee of any points charged against the operating record of such registrant or licensee. Any person notified by the registrar of any points charged against the operating

record of such person may request a hearing before the registrar, or his authorized representative, provided such request is made to the registrar within twenty-one days after the postmark date of such notice or within such further time as the registrar may deem to be equitable. Failure to request such hearing within such time shall thereafter bar such person from protesting the points so charged.

Hearing.

Section 9. Except as provided in section eight, any person aggrieved by a ruling or decision of the registrar may appeal from such ruling or decision in the manner provided in section twenty-eight of chapter ninety.

Appeal.

Section 10. The registrar shall maintain for each person to whom a license to operate motor vehicles is granted under section eight of chapter ninety a record of the points, fixed in accordance with this chapter, as are charged against the operating record of such person, in such manner that such points so charged because of such person's operation of a motor vehicle can be distinguished from such points so charged because of the operation by another of a motor vehicle owned by such person. The registrar shall, in addition, maintain for each person who owns a registered motor vehicle, but who has not been granted such a license to operate motor vehicles a record of the points, fixed in accordance with this chapter, as are charged against such person because of the operation by another of a motor vehicle owned by such person.

Record of points charged to be maintained by registrar.

Section 11. Each license to operate motor vehicles issued during the period of fifty-one months commencing on the effective date of the point system shall have recorded thereon by the registrar the number of points charged against the operating record of the licensee during the period commencing on the effective date of the point system and ending ninety days prior to the day preceding the effective date of such license. Thereafter each such license issued shall have recorded thereon by the registrar the number of points charged against the operating record of the licensee during the period of forty-eight months ending ninety days prior to the day preceding the effective date of such license. In making such record on such license, the number of points charged against the operating record of the licensee because of his operation of motor vehicles and because of the operation by others of a motor vehicle owned by him shall be separately shown.

Points charged to be recorded on license to operate.

Section 12. The owner of a motor vehicle, upon request of an insurance company issuing, renewing or continuing a motor vehicle liability policy or bond covering said motor vehicle or to which application is made for such a policy or bond shall furnish to such insurance company under the penalties of perjury his operating point record as recorded on his license to operate motor vehicles, and for this purpose may be required to exhibit his license to a duly authorized representative of such insurance company.

Furnishing of operating point record to insurance companies, required.

Section 13. The registrar shall transmit to the commissioner of insurance a notice of all points charged against every registrant or licensee. The records required under this chapter to be kept in the custody of the registrar shall not be deemed to be public records. The commissioner of insurance shall, in accordance with such rules and regulations as he shall prescribe, make available to insurance companies such information with respect to the operating records of all registrants and licensees as shall be required for the proper application of classifications of risks, premium charges and premium surcharges to motor vehicle liability policies and bonds, both as defined in section thirty-four A of chapter ninety.

Transmittal, custody.

Inspection of operating point records, regulated.

Section 14. Each motor vehicle liability policy and bond, both as defined in section thirty-four A of chapter ninety, issued to become effective or having an anniversary date subsequent to the thirty-first day of December, nineteen hundred and fifty-five, which is not subject to the application of any experience rating plan promulgated by the commissioner of insurance for the modification of the premium rates fixed and established for such policies and bonds in accordance with section one hundred and thirteen B of chapter one hundred and seventy-five, and which covers a motor vehicle within the "private passenger" or "motorcycles, skoot-mo-biles and other similar vehicles" classifications as defined in the classifications of risks promulgated by the commissioner of insurance in accordance with said section one hundred and thirteen B, shall be subject to the application of appropriate premium surcharges. Such premium surcharges shall, in the case of an owner of a registered motor vehicle to whom a license to operate motor vehicles has been granted under section eight of chapter ninety, be based upon the total number of points fixed in accordance with this chapter, charged against the operating record of such owner in accordance with the provisions of section seven, during the period of forty-eight months ending on a date ninety days prior to the expiration date of the last expired license period prior to the effective or anniversary date of such policy or bond, or that portion of such forty-eight month period during which the point system established by the registrar has been in effect. The points to be taken into account for such licensee shall be the sum of the points charged against such licensee because of his operation of a motor vehicle and the points charged against such licensee because of the operation by another of a motor vehicle owned by such licensee accruing during the period prescribed in accordance with the foregoing. Such premium surcharges shall, in the case of an owner of a registered motor vehicle to whom such a license to operate motor vehicles has not been granted under section eight of chapter ninety, be based upon the number of points charged against such owner in accordance with the provisions of section seven, during the period of forty-eight months ending on the thirty-first day of August preceding the effective or anniversary date of the

Application of premium surcharges to liability policy and bond, regulated.

policy or bond, or that portion of such forty-eight month period during which the point system established by the registrar has been in effect.

Surcharges to liability policies or bonds, how applied.

Section 15. The commissioner of insurance shall, in fixing and establishing classifications of risks and premium charges as required by section one hundred and thirteen B of chapter one hundred and seventy-five for motor vehicle liability policies or bonds, written to become effective or having anniversary dates after the thirty-first day of December, nineteen hundred and fifty-five, give consideration to the points charged in accordance with the provisions of section seven against the operating records of the owners of motor vehicles to whom licenses to operate motor vehicles have been granted under section eight of chapter ninety and to the records of points charged in accordance with the provisions of section seven against the owners of motor vehicles to whom licenses to operate motor vehicles have not been granted under section eight, and shall fix and establish a schedule of premium surcharges or penalties to be applied to premium charges, as otherwise determined, for such policies and bonds, such schedule to be graduated according to the point accumulation records of the owners of the motor vehicles covered under such policies or bonds. Said schedule of surcharges shall provide for an equal surcharge in money throughout the commonwealth in accordance with the points charged irrespective of zones and shall not be based upon a percentage of the premiums. The commissioner of insurance in fixing and establishing premium charges in accordance with said section one hundred and thirteen B shall give consideration to the additional premiums developed by the application of such premium surcharges or penalties in each zone.

Surcharges to be equal throughout the commonwealth.

Promulgation of rules and regulations.

Section 16. The registrar and the commissioner of insurance shall each have authority to prepare and promulgate such rules and regulations as shall be necessary to carry out the provisions and purposes of this chapter.

Refusal of registration in certain cases, permitted.

Section 17. The registrar may refuse to register or may suspend the registration of any motor vehicle in the name of any person, if he has reasonable grounds to believe that such motor vehicle has been transferred for the primary purpose of securing a lower premium surcharge or avoiding the imposition of a premium surcharge or that such registration will have the effect of defeating any of the purposes of this chapter.

G. L. (Ter. Ed.), 90, § 26, amended.

Reports of certain accidents, required.

SECTION 2. Chapter 90 of the General Laws is hereby amended by striking out section 26, as appearing in the Tercentenary Edition, and inserting in place thereof the following section: — *Section 26.* Every person operating a motor vehicle which is in any manner involved in an accident in which any person is killed or injured therein, or in which there is damage in excess of one hundred dollars to any one vehicle or other property, shall forthwith report in writing to the registrar on a form approved by him. The registrar may revoke or suspend the license of any person violating this section.

G. L. (Ter. Ed.), 90, § 27, etc., amended.

SECTION 3. The first sentence of section 27 of said chapter 90, as most recently amended by section 2 of chapter 115 of the acts of 1949, is hereby further amended by striking out the words "provision of this chapter relating to motor vehicles" and inserting in place thereof the words : — statute, by-law, ordinance or regulation relating to the operation or control of motor vehicles, other than violations of section twenty A.

G. L. (Ter. Ed.), 90, new § 29A, added.

Notice to violators of motor vehicle laws, how given, etc.

SECTION 4. Said chapter 90 is hereby amended by inserting after section 29 the following section: — *Section 29A.* It shall be the duty of any police officer or any person appointed by the registrar under section twenty-nine who observes any violation of any statute, by-law, ordinance or regulation relating to the operation or control of motor vehicles other than violations of section twenty A to give notice forthwith to the offender that such violation shall be reported to the registrar. Such notice, the form of which shall be approved by the registrar, shall be made in triplicate and shall contain the name and address of the offender and, if served with notice in hand at the time of such violation, the number of his license, if any, to operate motor vehicles, the registration number of the motor vehicle involved, the time and place of the violation, and the specific offense charged. The police officer, or other person observing such violation, shall sign such notice and if possible deliver a copy of said notice to the offender at the time and place of the violation. Whenever it is not possible to deliver a copy of said notice to the offender at the time and place of the violation, one copy shall be mailed within a reasonable time after said violation to the address of the registrant of the motor vehicle involved. At or before the completion of each tour of duty, the police officer, or such person observing said violation, shall give to his department the copies of each notice of such violation. One copy, signed by the officer and endorsed by the head of the department or by a person authorized by the head of the department, shall immediately be delivered or mailed to the registrar.

G. L. (Ter. Ed.), 175, new § 113H, added.

Apportionment among insurance companies of certain applicants for insurance, required.

SECTION 5. Chapter 175 of the General Laws is hereby amended by inserting after section 113G, inserted by chapter 406 of the acts of 1939, the following section: — *Section 113H.* Insurance companies undertaking to issue motor vehicle liability policies or bonds, both as defined in section thirty-four A of chapter ninety, shall co-operate in the preparation and submission of a plan for the fair and equitable apportionment among such insurance companies of applicants for insurance who are in good faith entitled to and are unable to procure through ordinary methods motor vehicle liability insurance. Such plan shall provide for the issuance of motor vehicle liability policies insuring, with respect to bodily injury liability on the ways of the commonwealth and, at the option of the insured, the combination of bodily

between the shores of Vineyard Haven Harbor as defined by the harbor and land commissioners under authority of chapter one hundred and ninety-six of the acts of eighteen hundred and eighty-one. All of the foregoing positions and bearings refer to the North American Datum established prior to nineteen hundred and twenty-seven.

SECTION 2. The department of public works is hereby directed to file in the office of the state secretary and in the registry of deeds for Dukes county a plan showing the boundary line hereby established. *Approved June 7, 1955.*

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*Chap.*417 AN ACT RELATIVE TO ASSESSMENT OF POINTS UNDER THE HIGHWAY SAFETY ACT AND MERIT RATING SYSTEM.

Be it enacted, etc., as follows:

G. L. (Ter. Ed.), 90A, new § 7A, added. Assessment of points.

Chapter 90A of the General Laws is hereby amended by inserting after section 7 the following section: — *Section 7A.* Notwithstanding any contrary provision of law, no points shall be assessed against the operating record of the owner of a motor vehicle as a result of any violation unless the owner is the operator thereof, except where: —

(*a*) The owner permits an intoxicated person to operate his motor vehicle.

(*b*) The owner permits an improper person to operate his motor vehicle.

(*c*) The owner permits operation of his motor vehicle by a person without a license or after the revocation or suspension of said person's license to operate.

(*d*) The owner permits operation by an operator in violation of restrictions on the license of said operator.

(*e*) The motor vehicle is being operated without an inspection sticker.

(*f*) The motor vehicle is being operated with improper equipment.

(*g*) The owner knowingly permits use of his motor vehicle in the commission of a crime. *Approved June 7, 1955.*

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*Chap.*418 AN ACT RELATIVE TO FEES AND CHARGES OF REGISTERS OF PROBATE AND INSOLVENCY.

Emergency preamble.

Whereas, The deferred operation of this act would tend to defeat its purpose, which is to increase forthwith certain fees and charges of registers of probate and insolvency, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public convenience.

Be it enacted, etc., as follows:

G. L. (Ter. Ed.), 262, § 40, etc., amended.

SECTION 1. Chapter 262 of the General Laws is hereby amended by striking out section 40, as most recently amended by section 6 of chapter 562 of the acts of 1954, and inserting

Fees.

in place thereof the following section: — *Section 40.* The fees of registers of probate and insolvency, payable in ad-

-two, the attorney general may apply to the appro- court for an order enjoining such person from engaging ıtinuing to engage in the activity violative of said ı, and upon a showing that such person has engaged, bout to engage, in any such activity, a permanent or rary injunction, restraining order or other order may ıted.

Attorney general may apply for court order.

TION 3. The persons initially appointed by the gov- to the Massachusetts commission on atomic energy shed by section eighty-six of chapter six of the Gen- ws as appearing in section two of this act, shall serve ns of one, two, three, four, five and six years, respec- as designated by the governor. Upon the completion such term, his successor shall be appointed in the provided by said section eighty-six.

Terms of members.

Approved August 9, 1956.

T RELATING TO THE ASSESSMENT OF POINTS UNDER THE MASSACHUSETTS HIGHWAY SAFETY ACT. *Chap.*646

eas, The deferred operation of this act would tend ıt its purpose, which is to provide forthwith that the r of motor vehicles may assess certain points against ord of a motor vehicle operator, thereby enabling a f determining the ability of certain operators, there- s hereby declared to be an emergency law, necessary immediate preservation of the public safety.

Emergency preamble.

ıcted, etc., as follows:

n 7 of chapter 90A of the General Laws, as appear- ction 1 of chapter 570 of the acts of 1953, is hereby l by striking out, in line 5, the word "shall" and ; in place thereof the word: — may, — so that the tence will read as follows: — On and after the date the committee as the effective date of the point nd of the schedule of penalties, the registrar, upon pt of any report required by law to be made to him porting of which is provided for by law, may charge ber of points indicated in the scale of points for the f such report against the operating record of the of the motor vehicle to which such report relates.

G. L. (Ter. Ed.), 90A, § 7, etc., amended.

Assessment of points under Massachusetts highway safety act.

Approved August 9, 1956.

AUTHORIZING THE TOWN OF FALMOUTH TO BORROW FOR ITS SHARE OF THE EXPENSES OF A CERTAIN WORKS PROJECT AT FALMOUTH INNER HARBOR AND RIZING SAID TOWN TO ACQUIRE LAND THEREFOR, AND TING AND CONFIRMING CERTAIN ACTION TAKEN BY WN IN CONNECTION WITH SAID PROJECT. *Chap.*647

ted, etc., as follows:

N 1. The action of the town of Falmouth at a wn meeting held on June twenty-first, nineteen

nine A of chapter thirty nor to chapter thirty-one of the General Laws. The commission shall be provided with suitable quarters in the State House or elsewhere in the City of Boston.

SECTION 4. It shall not be a violation of section six or of clause (*a*) of section twenty-three of chapter two hundred and sixty-eight A of the General Laws if any member of the commission acts in matters affecting an institution which he represents or in which he holds any office or with which he has any connection, direct or indirect.

SECTION 5. Any reference in this act to a private college, university, junior college or other private institution of higher education shall be deemed to refer only to non-profit institutions.

Approved May 13, 1964.

THE COMMONWEALTH OF MASSACHUSETTS,
EXECUTIVE DEPARTMENT, STATE HOUSE,
BOSTON, June 1, 1964.

The Honorable KEVIN H. WHITE, *Secretary of the Commonwealth, State House, Boston, Massachusetts.*

DEAR MR. SECRETARY: — I, Endicott Peabody, pursuant to the provisions of Article XLVIII of the Amendments to the Constitution, the Referendum II, Emergency Measures, hereby declare in my opinion the immediate preservation of the public convenience requires that the law being Chapter 388 of the Acts of 1964 entitled "An Act Establishing the Higher Education Facilities Commission for the Purpose of Assisting the Commonwealth in Its Participation in the Grant Programs Under the Higher Education Facilities Act of Nineteen Hundred and Sixty-Three." and the enactment of which received my approval on May 13, 1964, should take effect forthwith.

I further declare that in my opinion said law is an emergency law and the facts constituting the emergency are as follows:

Postponement of the operation of this act would defeat its purpose as this commission should be established without delay, in order to avail itself of Federal grants.

Sincerely,

ENDICOTT PEABODY,
Governor of the Commonwealth.

OFFICE OF THE SECRETARY, BOSTON, June 1, 1964.

I, Kevin H. White, Secretary of the Commonwealth, hereby certify that the accompanying statement was filed in this office by His Excellency the Governor of the Commonwealth of Massachusetts at twelve o'clock and thirty minutes, P.M., on the above date, and in accordance with Article Forty-eight of the Amendments to the Constitution said chapter takes effect forthwith, being chapter three hundred and eighty-eight of the acts of nineteen hundred and sixty-four.

KEVIN H. WHITE,
Secretary of the Commonwealth.

Chap. 389. AN ACT PROVIDING THAT NO TRUSTEE OF A PUBLIC INSTITUTION OF HIGHER EDUCATION OPERATED BY THE COMMONWEALTH SHALL BE ELIGIBLE TO HOLD A POSITION WITH SAID INSTITUTION FOR A CERTAIN PERIOD OF TIME AFTER TERMINATING HIS SERVICES AS SUCH TRUSTEE.

Be it enacted, etc., as follows:

Chapter 268A of the General Laws is hereby amended by inserting after section 23 the following section: —

Section 23A. No trustee of any public institution of higher education operated by the commonwealth shall be eligible to be appointed to or hold any other office or position with said institution for a period of three years next after the termination of his services as such trustee.

Approved May 13, 1964.

Chap. 390. AN ACT PERMITTING THE DIVISION OF FISHERIES AND GAME TO ISSUE PERMITS FOR THE TRAPPING OF CERTAIN BIRDS.

Be it enacted, etc., as follows:

Chapter 131 of the General Laws is hereby amended by inserting after section 87 the following section: —

Section 87A. Notwithstanding any other provision of law, the director may, upon application of a farmer, as defined in section one A of chapter one hundred and twenty-eight, grant a permit to trap live, and thereafter destroy, birds that are destroying agricultural crops or endangering the health of livestock, poultry or fur bearing animals. Each applicant shall state the type of trap to be used, the location of each such trap and the period within which he intends to use such trap, and such other information as the director may deem necessary. Each application shall be accompanied by a fee of five dollars. The farmer shall mark each trap with his name and address and the number of the permit issued to him by the division, and he or his agent shall check each such trap twice daily. The director shall issue rules and regulations relative to the type of traps and kinds of birds which may be trapped, and such other rules and regulations as he may deem necessary for the protection of song and game birds. The director and members of the division of law enforcement may, for the purpose of inspecting such traps, enter upon or pass through or over private lands and property. Whoever violates any provision of this section or any rule or regulation made thereunder shall be punished by a fine of not less than ten dollars nor more than fifty dollars. *Approved May 15, 1964.*

Chap. 391. AN ACT AUTHORIZING THE COMMISSIONER OF INSURANCE TO ESTABLISH CLASSIFICATIONS OF RISKS BASED ON ACCIDENT INVOLVEMENT.

Be it enacted, etc., as follows:

The first paragraph of section 113B of chapter 175 of the General Laws, as appearing in the Tercentenary Edition, is hereby amended by inserting after the word "risks", in line 3, the words: —, including classifications of risks based on accident involvement,.

Approved May 15, 1964.

in the current year, fix and establish the same classifications of risks and premium charges at least fifteen per cent lower for each classification of risk within each territory from the following rates: —

Territories	*Class 10*	*Class 12*	*Class 20*	*Class 22*	*Class 24*
1	$117.00	$140.50	$351.00	$374.50	$193.00
2	103.00	129.50	324.00	345.50	178.00
3	100.50	120.50	301.50	321.50	166.00
4	96.50	116.00	289.50	309.00	159.00
5	88.00	105.50	264.00	281.50	145.00
6	79.00	95.00	237.00	253.00	130.50
7	68.00	81.50	204.00	217.50	112.00
8	63.50	76.00	190.50	203.00	105.00
9	59.00	71.00	177.00	189.00	97.50
10	54.50	65.50	163.50	174.50	90.00
11	49.00	59.00	147.00	157.00	81.00
12	43.50	52.00	130.50	139.00	72.00
13	37.00	44.50	111.00	118.50	61.00
14	30.50	36.50	91.50	97.50	50.50
15	24.00	29.00	72.00	77.00	39.50

Territories	*Class 26*	*Class 30*	*Class 40*	*Class 42*	*Class 50*
1	$164.00	$169.50	$222.50	$304.00	$234.00
2	151.00	156.50	205.00	281.00	216.00
3	140.50	145.50	191.00	261.50	201.00
4	135.00	140.00	183.50	251.00	193.00
5	123.00	127.50	167.00	229.00	176.00
6	110.50	114.50	150.00	205.50	158.00
7	95.00	98.50	129.00	177.00	136.00
8	89.00	92.00	120.50	165.00	127.00
9	82.50	85.50	112.00	153.50	118.00
10	76.50	79.00	103.50	141.50	109.00
11	68.50	71.00	93.00	127.50	98.00
12	61.00	63.00	82.50	113.00	87.00
13	52.00	53.50	70.50	96.00	74.00
14	42.50	44.00	58.00	79.50	61.00
15	33.50	35.00	45.50	62.50	48.00

Said premium charges shall be the maximum charges to be used and charged by companies in connection with the issue or execution of motor vehicle liability policies or bonds, both as defined in section thirty-four A of chapter ninety of the General Laws for the ensuing calendar year or any part thereof but any company may make written application to the commissioner of insurance for permission to use, in place of the premium charges fixed and established by him as aforesaid, such lesser charges as are now permitted by the provisions of section one hundred and thirteen B of chapter one hundred and seventy-five.

The rates of all other motor vehicle insurance coverages including those motor vehicle insurance rates filed according to the provisions of chapter one hundred and seventy-five A of the General Laws and established under the provisions of section one hundred and thirteen C of chapter one hundred and seventy-five of the General Laws shall be at least fifteen per cent lower than all rates for such coverages now in effect for the year nineteen hundred and seventy.

All the reduced rates in this section shall be deemed and accepted as adequate, just, reasonable and nondiscriminatory rates for the calendar year nineteen hundred and seventy-one, based on the current relevant costs. Any future increases in these rates shall be allowed only in relation to increases in such relevant costs; and any reduction in such relevant costs shall result in corresponding reductions of the insurance rates.

SECTION 7. Section 113B of chapter 175 of the General Laws, as most recently amended, is hereby further amended by inserting after the first paragraph the following paragraph: —

In fixing and establishing classifications for premium charges to be used in connection with motor vehicle liability policies or bonds for the calendar year nineteen hundred and seventy-two and each calendar year thereafter, the commissioner shall establish reasonable surcharges, above the premium charges otherwise due, for each conviction for a moving violation committed, within the period herein specified, by the policyholder of such a policy, or the obligor of such a bond, or any other driver who resides in the same household as the policyholder or obligor and is included among those authorized to drive any vehicle covered by such policy or bond. The commissioner shall also establish reasonable discounts to be applied when neither the policyholder nor obligor, nor any other driver who resides in his household and is authorized to drive any vehicle covered by such policy or bond, has been the driver of a vehicle involved, within the period herein specified, in an accident required to be reported under the provisions of section twenty-six of chapter ninety. The period to be considered in fixing the surcharges and discounts for a calendar year shall be the period closing on August the thirty-first next preceding the calendar year to which such surcharges and discounts apply; it shall be a period commencing no sooner than September the first, nineteen hundred and seventy and in no event exceeding five years in length; and, with respect to calculating a discount, it shall be the period commencing on September the first next after the last reportable accident involvement. In the absence of a finding otherwise by the commissioner, based on data accumulated under this merit system and such other evidence as the commissioner considers relevant and material, reasonable surcharges and discounts shall be presumed to be the following: for each conviction of driving under the influence of intoxicating liquor or narcotic or hallucinogenic drugs, a surcharge of one hundred per cent; for each conviction of speeding, a surcharge of twenty per cent; for each conviction of any other moving violation, a surcharge of ten per cent; for each full year free of reportable accident involvement, a discount of two per cent.

SECTION 8. Said chapter 175 is hereby amended by inserting after section 22D the following section: —

Section 22E. No company shall issue any policy of insurance which provides coverage against loss or damage to, or loss of use of, motor vehicle resulting from collision, fire, lighting, any larcency, pilferage, theft, malicious mischief, vandalism or any other perils usually insured against, or which insures any person against, legal liability for loss or damage on account of the bodily injury or death of any other person or on account of any damages to property of another, arising out of the

Item		Subtotal	Total
18.	For court houses and registry buildings, maintenance and operation		$232,036 10
	1. Personal services	$56,117 10	
	2. Contractual services	152,791 00	
	3. Supplies and materials	8,368 00	
	4. Current charges and obligations	13,200 00	
	5. Equipment	1,560 00	
20.	For agricultural school or county cooperative extension service		117,737 14
	1. Personal services	100,394 24	
	2. Contractual services	12,420 00	
	3. Supplies and materials	3,618 00	
	4. Current charges and obligations	690 00	
	5. Equipment	614 90	
21.	For the Mount Tom state reservation, maintenance and operation		22,531 90
24.	For noncontributory pensions		25,919 88
25.	For contributory retirement system and supervisory expenses		175,221 66
26.	For miscellaneous and contingent expenses		60,197 19
27.	For unpaid bills of previous years		10,000 00
28.	For reserve fund		60,000 00
29.	For advertising recreational, industrial and agricultural advantages of the county		27,960 00
31.	For radio system for fire protection		400 00
32.	For forest development		3,699 04
35.	For county planning		31,575 40
39.	For group insurance		65,000 00
	Total amount of appropriations		$2,984,197 98
	Less estimated amount available for reduction of county tax		317,954 00
	And the county commissioners of Hampshire county are hereby authorized to levy as the county tax of said county for the current year, in the manner provided by law, the sum of		$2,666,243 98

The following sum is hereby appropriated for said fiscal year from federal revenue sharing funds, subject to the provisions of law regulating the disbursement of county funds and the approval thereof.

Item			
2.	For reduction of county debt		$160,000 00
16.	For jail and house of correction		27,426 00
	1. Personal services	$27,426 00	
	Total		$187,426 00

SECTION 2. This act shall take effect upon its passage.

Approved August 2, 1976.

Chap. 266. AN ACT RELATIVE TO MOTOR VEHICLE INSURANCE.

Be it enacted, etc., as follows:

SECTION 1. Chapter 6 of the General Laws is hereby amended by inserting after section 182 the following section, under the caption MOTOR VEHICLE INSURANCE MERIT RATING BOARD:-

	Subtotal	Total
ce and operation		$232,036 10
.	$56,117 10	
.	152,791 00	
.	8,368 00	
.	13,200 00	
.	1,560 00	
nsion service		117,737 14
.	100,394 24	
.	12,420 00	
.	3,618 00	
.	690 00	
.	614 90	
:e and operation ..		22,531 90
.....		25,919 88
ry expenses		175,221 66
.....		60,197 19
.....		10,000 00
.....		60,000 00
:ultural advantages		
.....		27,960 00
.....		400 00
.....		3,699 04
.....		31,575 40
.....		65,000 00
ıs		$2,984,197 98
of county tax		317,954 00
county are of said county for w, the sum of		$2,666,243 98
said fiscal year from ovisions of law regu- e approval thereof.		
.....		$160,000 00
.....		27,426 00
....	$27,426 00	
.....		$187,426 00

ect upon its passage.

Approved August 2, 1976.

MOTOR VEHICLE INSURANCE.

ieral Laws is hereby amended following section, under the JRANCE MERIT RATING

Section 183. There shall be within the registry of motor vehicles a motor vehicle insurance merit rating board, hereinafter called the board. The board shall consist of the registrar of motor vehicles, who shall serve as chairman, the commissioner of insurance and the attorney general or his designee. The board shall appoint a director, who shall not be subject to the provisions of chapter thirty-one. The board shall formulate and administer a plan for the compiling, gathering and disseminating of information, operator records and histories, and such other data as it deems necessary or appropriate pertaining to motor vehicle accidents, claims under motor vehicle policies and motor vehicle violations in order to facilitate the implementation and continued operation of merit rating with respect to motor vehicle insurance as provided in section one hundred and thriteen P of chapter one hundred and seventy-five.

Such plan shall include a system for the gathering and maintaining of the aforementioned information, operator records and histories, and other data and for the prompt and efficient dissemination of such to insurance companies making inquiry with respect to the motor vehicle accident, motor vehicle insurance claim and motor vehicle violation record of any owner or operator insured by or applying for insurance from any such insurer. Such records and data disseminated by such plan shall be used excluively for the purposes of merit rating under the provisions of section one hundred and thirteen P of chapter one hundred and seventy-five. Whoever disseminates or uses records or data disseminated under such plan contrary to the provisions of this section shall be punished by a fine of not more than one thousand dollars for each offense or by imprisonment for not more than one year, or both.

The board shall have access to criminal offender record information for the purpose of developing the plan. The criminal history systems board shall certify the board and each insurance company doing motor vehicle insurance business within the commonwealth for access to criminal offender record information pertaining to violations of chapter ninety by its insureds; provided, however, that the board and each such company shall comply with the regulations of the criminal history systems board and be subject to the provisions of sections one hundred and seventy-two to one hundred and seventy-eight, inclusive.

The board may expend for expenses and for legal, investigative, clerical and other assistance such sums as may be appropriated therefor; provided, however, that all costs of administration and operation of said board shall be borne by insurance companies doing motor vehicle insurance business within the commonwealth. The commissioner of insurance shall apportion such costs among all such companies and shall assess them for the same on a fair and reasonable basis.

both, or practices that are shown to be designed to offset the effect of any deductible purchased by a physical damage coverage policyholder.

The commissioner shall, after notice and hearing, in the manner provided in chapter thirty A, adopt rules and regulations governing licensees under this section in order to promote the public welfare and safety and nothing in this section shall be construed to limit the general power of the commissioner hereunder.

SECTION 18. Said chapter 175 is hereby further amended by striking out section 113 0, as most recently amended by section 3 of chapter 1 of the acts of 1976, and inserting in place thereof the following two sections:-

Section 113 0. All policies providing fire and theft coverage or comprehensive coverage, so called, shall pay for loss or damage to the insured vehicle under the terms of the policy up to a limit equal to the actual cash value of the vehicle less a deductible of two hundred dollars. Insurers shall also make available additional coverage whereby the deductible of two hundred dollars is reduced to an amount not less than one hundred dollars, except that an insurer may refuse to issue such optional additional coverage on the basis of claims paid; provided, that no insurer may refuse to issue such optional additional coverage because of age, sex, race, occupation or principal place of garaging of the vehicle. Notwithstanding the foregoing, any deductible pertaining to the comprehensive coverage, so called, shall not be applicable to damage to glass of any motor vehicle so covered. Insurers shall also make available additional coverage to provide that, in determining actual cash value, no deduction for depreciation shall be allowed to reduce the value of the vehicle to less than an agreed value for that particular vehicle, provided the insurer is permitted to inspect the vehicle at the time of application for such additional coverage. No payment shall be made by the insurer for loss or damage to the insured vehicle on a claim for theft coverage, so called, until the insured signs and submits to the appropriate police authority a statement under the penalties of perjury on a form containing such information relating to the theft of the insured vehcile as is prescribed by the commissioner.

No insurer shall make any payments to the insured under a policy providing fire and theft coverage or comprehensive coverage, so called, unless it has received a claim form from the insured stating that the repair work described in an appraisal made pursuant to section one hundred and thirteen M of chapter one hundred and seventy-five has been completed. In any case where the insurer fails to make payment within seven days of receipt of the above claim form, the insured may commence a civil action for payments claimed to be due. If the court determines that the insurer was unreasonable in refusing to pay said insured's claim,

the claimant shall be entitled to recover double the amount of damage plus costs and reasonable attorneys' fees fixed by the court. If such claim form is not received by the insurer, the insurer shall pay to the insured only the decrease in actual value of the insured vehicle less any deductible. If the insured elects not to repair the vehicle, or if the insurer does not receive a claim form from the insured stating that the repair work has been completed, the insurer shall decrease the actual cash value of the insured vehicle by the amount of damage sustained.

Section 113P. The commissioner shall after notice and a hearing in the manner provided in chapter thirty A, establish the provisions of a merit rating plan for use by all insurers to vary rates and premiums for private passenger motor vehicles; provided that an insurer may file and use a merit rating plan in accordance with chapter one hundred and seventy-five E which meets the standards of this section and is in conformance with any minimum standards as may be promulgated by the commissioner. Surcharges shall be imposed on account of negligence determined to be more than fifty per cent of the cause of a motor vehicle accident, and on account of convictions of moving violations of motor vehicle laws. A surcharge of fifty dollars shall be imposed for the first surchargeable accident in a three-year period and the following specified surcharges for the first conviction in a three-year period for each of the following violations:-

(*a*) Two hundred dollars - operating a motor vehicle while under the influence of intoxicating liquor, marijuana or narcotic drugs, or depressant or stimulant substances or under the influence of the vapors of glue, carbon tetrachloride, acetone, ethylene, dichloride, toluene, chloroform, xylene or any combination thereof. Said surcharge shall apply to any person charged with operating a motor vehicle while under the influence of intoxicating liquor and who is assigned to a driver alcohol education program as described in section twenty-four D of chapter ninety.

(*b*) One hundred dollars - operating a motor vehicle recklessly, or operating negligently so that the lives or safety of the public might be endangered.

(*c*) Twenty-five dollars - speeding and other moving traffic violations, but excluding operating without possession of a license or registration and such other exclusions as provided by the commissioner.

Surcharges for such additional accidents and convictions of moving traffic violations of motor vehicle laws shall be established in the merit rating plan. Surcharges for surchargeable accidents and convictions of moving violations shall be assessed against the policy of the driver so chargeable or convicted or any other driver who is included among those authorized to drive or customarily drives any vehicle covered by such policy. No such plan shall use

any records or factors which occurred more than three years prior to the policy year for which it varies rates or premiums. Where there is more than one surcharge that would be applied resulting from a single incident, then only that surcharge that represents the largest dollar amount shall be assessed.

Credits shall be established for risks with no accidents or convictions of moving violations of motor vehicle laws which balance the surcharges to be collected. Insurers are required to assure that all surcharges collected are credited to insureds entitled to credits pursuant to a formula promulgated by the commissioner. Such formula shall require that said credits shall include investment income earned by insurers on the surcharge collected. Each insurer shall assure that each insured surcharged or receiving credits receives information in a form prepared by the commissioner concerning the merit rating and credit procedure. Within thirty days after the insurer receives sufficient information to impose a surcharge, said insurer shall notify the policyholder of such surcharge.

Absent a clear showing to the contrary, accidents under the following circumstances will be presumed not to be accidents based on fault which is in excess of fifty per cent, and therefore will not be subject to surcharge:

(*a*) accidents in which the insured's vehicle is struck while lawfully parked;

(*b*) accidents in which the insured's vehicle is struck in the rear by another vehicle moving in the same direction;

(*c*) accidents in which the insured's vehicle is struck by flying gravel, missiles or falling objects;

(*d*) accidents in which the insured's vehicle is struck by another vehicle which unlawfully leaves the scene of the accident if the insured reports such accident in writing to the police within forty-eight hours.

Failure of an insurer to charge the insured for a surcharge known to be due under a merit rating plan shall subject the insurer to the same penalties prescribed in section twelve of chapter one hundred and seventy-five E for a violation of said chapter.

After any collision, limited collision or property damage liability claim has been filed, the insurer shall determine whether the insured should be surcharged in accordance with rules for determining fault in excess of fifty per cent to be promulgated by the board of appeals on motor vehicle policies and bonds, hereinafter called the board.

Any insured aggrieved by any determination of an insurer as to the application of a surcharge may file a written complaint to the board, within thirty days after receiving notification of said surcharge, on a form approved by the commissioner and supplied by the insurer at the time of the notification of the surcharge. The

board may deny such appeal without a hearing on the basis of the standards of fault to be promulgated by the board. In the notice of its decision to deny the complaint by the insured, the board shall notify the insured that he has a right to a hearing on the application of the surcharge.

The board shall provide the insurer and insured with at least ten days notice of any hearing held under this section. If after a hearing, the board finds that the application of the surcharge was in accordance with the standards promulgated by the board and the provision of this section, it shall order the surcharge applied to the insured's next premium due. If the board finds that the insurer's application of said surcharge was not in accordance with said standards and provisions, it shall order the insurer to vacate said surcharge and delete it from any premium charged. The board may designate a person to act as a hearing officer pursuant to this section. The hearing officer shall file a memorandum of his findings or orders in the office of the commissioner, and shall send a copy to the insurer and the insured.

Any person or company aggrieved by any finding or order of the board, may, within ten days after the filing of the memorandum thereof in the office of the commissioner, appeal therefrom to the superior court, in any county in case of an appeal by any complainant, and in the county in which the complainant resides in case of an appeal by the company. The appellant shall file with his appeal a duly certified copy of the complaint and of the finding and order thereon, and, if the appeal is taken from a finding and order of the board in respect to a cancellation, the clerk of the court shall forthwith upon the filing of such an appeal give written notice of the filing thereof to the registrar of motor vehicles and to the appellee. The court shall, after such notice to the parties as it deems reasonable, give a summary hearing on such appeal and shall have jurisdiction in equity to review all questions of fact and law, and to affirm or reverse such finding or order and may make any appropriate decree. The court or justice may allow such appeal, finding or order to be amended. The decision of the court or justice shall be final. The clerk shall, within two days after the entry thereof, send an attested copy of the decree to each of the parties and the commissioner and to said registrar, or his office. The court or justice may make such order as to costs as it or he deems equitable. The superior court may make reasonable rules to secure prompt hearings on such appeals and a speedy disposition thereof.

The attested copy of a complaint, a finding and order of the board or a decree of the superior court, or a justice thereof, may be sent to the complainant, to the company and to said registrar by registered mail, postage prepaid, and any notice required by this section may be sent by mail, postage prepaid, addressed, in the

case of the complainant, to his address specified in the appeal and, in the case of the company, to its last home office address appearing on the records of the commissioner, or, in the case of a company of a foreign country, to its resident manager in the United States, at the last address appearing on said records, or to such other person as may previously have been designated by the company by a written notice filed in the office of the commissioner.

The municipal court of the city of Boston, and the justices thereof, shall have original jurisdiction, concurrently with the superior court, and the justices thereof, of all proceedings under this section relating to appeals from decisions of the board of appeals on motor vehicle liability policies and bonds, and for such purpose the municipal court of the city of Boston shall have the same power and authority as the superior court; provided, however, that in case of any appeal by the insurance company from the finding or order of the board to the municipal court of the city of Boston, said appeal may, if the complainant does not reside in Suffolk county, upon motion of the complainant, be transferred to and heard by the superior court in the county in which the complainant resides.

SECTION 19. The General Laws are hereby amended by striking out chapter 175E and inserting in place thereof the following chapter:-

CHAPTER 175E.
REGULATION OF RATES FOR MOTOR VEHICLE INSURANCE.

Section 1. The following words, as used in this chapter, unless the text otherwise requires or a different meaning is specifically required, shall mean:-

"Commissioner", the commissioner of insurance.

"Company", "insurance company" or "insurer", all corporations, associations, partnerships or individuals engaged as principals in the business of insurance.

Section 2. This chapter shall apply to coverage, whether compulsory or not, which is or may be afforded under motor vehicle liability policies or bonds, both as defined in section thirty-four A of chapter ninety.

Section 3. Such provisions of chapter one hundred and seventy-five A as are not inconsistent with this chapter shall apply to rate regulation pursuant to this chapter.

Section 4. The following standards shall apply to the making and use of rates pertaining to all insurance to which the provisions of this chapter are applicable:-

(*a*) Rates shall not be excessive or inadequate, as herein defined, nor shall they be unfairly discriminatory.

REGULATION 3-77

STANDARD MERIT RATING PLAN

Article I - Authority

This regulation is promulgated in accordance with the authority granted to the Commissioner of Insurance under Section 113P of Chapter 175 of the Massachusetts General Laws.

Article II - Definitions

As used in this regulation, the following words shall mean:

(2.1) "Commissioner", the Commissioner of Insurance appointed pursuant to Section 6 of Chapter 26 of the General Laws.

(2.2) "Credit", an amount subtracted from a Policyholder's premium as a result of the application of Merit Rating.

(2.3) "Experience Period", the three-year time interval ending on the first day of the second calendar month preceding the effective date of the year for which rates or premiums are varied as a result of the application of Merit Rating.

(2.4) "Insurer", any corporation, association, partnership, group or individual authorized to write motor vehicle insurance in the Commonwealth.

(2.5) "Involved Operator", any person determined to have been operating a vehicle subject to Merit Rating at the time of an accident subject to Merit Rating or having a conviction subject to Merit Rating as specified by Article IV of this regulation.

(2.6) "Merit Rating Board", the motor vehicle insurance merit rating board established pursuant to Section 183 of Chapter 6 of the General Laws.

(2.7) "Merit Rating", the varying of insurance rates and premiums for private passenger vehicles on the basis of accidents and convictions pursuant to the provisions of Section 113P of Chapter 175 of the General Laws.

(2.8) "Policyholder", the principal named insured in a motor vehicle insurance policy covering a private passenger vehicle registered in the Commonwealth.

(2.9) "Surcharge", an amount added to a Policyholder's premium as a result of the application of Merit Rating.

Section 5.1 - Claims Under Property Damage Liability Insurance

Within thirty days of the filing of any property damage liability claim in excess of fifty dollars resulting from an accident involving only one vehicle, where that vehicle was subject to Merit Rating, the Insurer shall notify the Involved Operator of its intention to impose a Surcharge unless, during that period, the Insurer shall have denied the claim or closed the claim with a payment of fifty dollars or less. For the purposes of this section, no claim shall be considered to have been denied if any reserve has been established for future payment of more than fifty dollars of the claim. If the Policyholder is a person other than the Involved Operator, the Insurer shall send the Policyholder a copy of the notice required by this section. The Insurer shall also send to the Merit Rating Board a copy of the notice required by this section.

Section 5.2 - Claims Under Collision Insurance

Within thirty days of the filing of any collision claim more than fifty dollars in excess of any applicable deductible resulting from an accident involving only one vehicle, where that vehicle was subject to Merit Rating, the Insurer shall notify the Involved Operator of its intention to impose a Surcharge unless, during that period, the Insurer shall have denied the claim or closed the claim with a payment of fifty dollars or less or unless the claim resulted from damage to the vehicle caused by flying gravel, missiles, or falling objects. For the purposes of this section, no claim shall be considered to have been denied if any reserve has been established for future payment of more than fifty dollars of the claim. If the Policyholder is a person other than the Involved Operator, the Insurer shall send the Policyholder a copy of the notice required by this section. The Insurer shall also send to the Merit Rating Board a copy of the notice required by this section.

Section 5.3 - Form of Surcharge Notice

Any notice of Surcharge under this article shall be on a form approved by the Commissioner. The notice shall include a form which may be used by the Policyholder or Involved Operator to appeal the imposition of any Surcharge.

Article VI - Notification of Surcharge Following Multiple Vehicle Accidents

Section 6.1 - Claims Under Property Damage Liability Insurance

Within thirty days of the filing of any property damage liability claim in excess of fifty dollars resulting from an accident involving more than one vehicle, where at least one vehicle is subject to Merit Rating, the Insurer shall notify the Involved Operator of its intention to impose a

of fifty dollars or less. If the Policyholder is a person other than the Involved Operator, the Insurer shall send the Policyholder a copy of the notice required by this section. The Insurer shall also send to the Merit Rating Board a copy of the notice required by this section.

Section 6.4 - Form of Surcharge Notice

Any notice of Surcharge under this article shall be on a form approved by the Commissioner. The notice shall include a form which may be used by the Policyholder or Involved Operator to appeal the imposition of any Surcharge to the board of appeal on motor vehicle liability policies and bonds pursuant to Section 113P of Chapter 175 of the General Laws.

Article VII - Notice of Surcharge Following Convictions

Conviction of any violation subject to Merit Rating or assignment to a driver alcohol education program as described in Section 24-D of Chapter 90 of the General Laws shall of itself be sufficient notice to the Involved Operator that a Surcharge is to be imposed. There shall be no right of appeal to the board of appeal on motor vehicle liability policies and bonds pursuant to Section 113P of Chapter 175 of the General Laws.

Article VIII - Additional Responsibilities of Insurers

Section 8.1 - Computation and Billing of Surcharges

Surcharges for which notice was given in accordane with Articles V, VI, and VII of this regulation during the applicable Experience Period shall be billed beginning with the next premium due. Surcharges are to be billed to the policy of the Involved Operator whenever possible. If an Involved Operator is a Policyholder, his policy of insurance shall be billed. If the Involved Operator is not a Policyholder, a policy of insurance on which he is a customary operator, if any, shall be billed. For the purposes of Articles VIII, IX, and X, the term "next premium due" refers to the first premium billed in connection with the issuance or renewal of a policy listing the Involved Operator as the Policyholder or as a customary operator at least two months after the issuance of a Surcharge notice to the Involved Operator. In this context, the term renewal shall include the endorsement of a policy in order to add an Involved Operator as a customary operator and the commencement of the second year of a policy with a term greater than twelve months. If a policy, with a term greater than twelve months includes fewer than twenty-four months, the Surcharge due at the commencement of the second year shall be pro-rated over the remaining months of the policy.

or more customary operators to any policy written on or after July 1, 1977, an Insurer must, within thirty days of the endorsement of the policy, obtain from the Merit Rating Board, in a manner prescribed by the Commissioner, Surcharge information relating to accidents and convictions subject to Merit Rating for any customary operator added to the policy.

Section 8.6 - Surcharges Involving More Than One Vehicle or Insurer

The total Surcharge amount paid as a result of a particular accident or conviction shall not exceed the amounts specified in Articles IX and X of this regulation. If the property damage liability and collision insurance for a vehicle are written by different insurers, each insurer shall bill that part of the total Surcharge amount apportioned to each coverage in accordance with Sections 9.4 and 10.10. If an Involved Operator customarily drives one or more vehicles insured for both property damage liability and collision coverages, the Surcharges attributable to that Involved Operator shall be billed to the policy or policies of one such vehicle.

Section 8.7 - Surcharges for Multiple Offenses

If an Involved Operator is convicted of two or more moving traffic violations, all of which arose from the same incident or occurrence, the amount of the Surcharge imposed shall be equal to the largest dollar amount that would apply if each individual violation were considered alone. If an Involved Operator is convicted of one or more moving traffic violations in connection with an accident subject to Merit Rating, the Surcharge imposed shall equal the largest dollar amount that would apply if the accident or conviction were considered alone. However, those accidents or convictions which do not result in Surcharges at that time shall be counted when determining whether subsequent accidents and convictions are the first, second, third or subsequent such incident during an Experience Period.

Article IX - Surcharge Schedule for Accidents

Section 9.1 - Surcharge for the First Accident

A Surcharge of fifty dollars shall be imposed for the first accident resulting in a Merit Rating Surcharge during an Experience Period. It shall be billed with the next premium due following the notification of the Surcharge as prescribed in Articles V and VI.

Section 9.2 - Surcharge for the Second Accident

A Surcharge of one hundred dollars shall be imposed for the second accident resulting in a Merit Rating Surcharge notice issued to a Policyholder or a customary operator during an

of the General Laws. It shall be billed with the next premium due following notification of the Surcharge as prescribed in Article VII.

Section 10.2 - Surcharge for Second Conviction for Operating a Motor Vehicle Under the Influence of Drugs or Intoxicating Liquor

A Surcharge of two hundred and twenty-five dollars shall be imposed for the second conviction of a Policyholder or a customary operator during an Experience Period for operating a motor vehicle while under the influence of intoxicating liquor or drugs as specified in Section 113P of Chapter 175 of the General Laws. It shall be billed with the next premium due following notification of the Surcharge. In addition to this Surcharge of two hundred and twenty-five dollars, a Surcharge of two hundred dollars shall also be imposed for the second such conviction during an Experience Period. This Surcharge of two hundred dollars shall be billed with the premium due one year subsequent to the next premium due following notification of the Surcharge.

Section 10.3 - Surcharges for Third and Each Subsequent Conviction for Operating a Motor Vehicle Under the Influence of Drugs or Intoxicating Liquor

A Surcharge of two hundred and fifty dollars shall be imposed for the third and each subsequent conviction of a Policyholder or a customary operator during an Experience Period for operating a motor vehicle while under the influence of intoxicating liquor or drugs as specified in Section 113P of Chapter 175 of the General Laws. It shall be billed with the next premium due following notification of the Surcharge. In addition to this Surcharge of two hundred and fifty dollars, a Surcharge of two hundred and twenty-five dollars shall also be imposed for the third and each subsequent such conviction during an Experience Period. This Surcharge of two hundred and twenty-five dollars shall be billed with the premium due one year subsequent to the next premium due following notification of the Surcharge. In addition to these Surcharges of two hundred and fifty dollars and two hundred and twenty-five dollars, a Surcharge of two hundred dollars shall also be imposed for the third and each subsequent such conviction during an Experience Period. This Surcharge of two hundred dollars shall be billed with the premium due two years subsequent to the next premium due following notification of the Surcharge.

Section 10.4 - Surcharge for First Conviction for Operating a Motor Vehicle Recklessly

A Surcharge of one hundred dollars shall be imposed for the first conviction during an Experience Period for operating a motor vehicle recklessly or negligently so that the lives

Section 10.8 - Surcharge for Second Conviction for Speeding and Other Moving Traffic Violations

A Surcharge of fifty dollars shall be imposed for the second conviction of a Policyholder or a customary operator during an Experience Period for any moving traffic violation subject to Merit Rating, except those violations referred to in Sections 10.1 through 10.6 of this regulation. It shall be billed with the next premium due following notification of the Surcharge. In addition to this Surcharge of fifty dollars, a Surcharge of twenty-five dollars shall also be imposed for the second such conviction during an Experience Period. This Surcharge of twenty-five dollars shall be billed with the premium due one year subsequent to the next premium due following notification of the Surcharge.

Section 10.9 - Surcharges for Third and Each Subsequent Conviction for Speeding and Other Moving Traffic Violations

A Surcharge of seventy-five dollars shall be imposed for the third and each subsequent conviction of a Policyholder or a customary operator during an Experience Period for any moving traffic violation subject to Merit Rating, except those violations referred to in Sections 10.1 through 10.6 of this regulation. It shall be billed with the next premium due following notification of the Surcharge. In addition to this Surcharge of seventy-five dollars, a Surcharge of fifty dollars shall also be imposed for the third and each subsequent such conviction during an Experience Period. This Surcharge of fifty dollars shall be billed with the premium due one year subsequent to the next premium due following notification of the Surcharge. In addition to these Surcharges of seventy-five dollars and fifty dollars, a Surcharge of twenty-five dollars shall also be imposed for the third and each subsequent such conviction during an Experience Period. This Surcharge of twenty-five dollars shall be billed with the premium due two years subsequent to the next premium due following notification of the Surcharge.

Section 10.10 - Apportionment of Surcharges for Convictions Between Coverages

All Merit Rating Surcharges shall be apportioned between property damage liability coverage and collision coverage on each policy of insurance in a manner prescribed by the Commissioner. If any Policyholder elects not to purchase collision coverage, the applicable Surcharge apportioned to collision coverage shall not be billed to that Policyholder.

Article XI - Penalty for Not Assessing a Surcharge

Failure of an Insurer or person to impose a Surcharge or bill a Policyholder in accordance with this regulation shall

Regulation BA 1-77

Standards Of Fault To Be Used By The Board Of Appeal On Motor Vehicle Liability Policies And Bonds And Insurers In Determining The Application Of Surcharges In Accordance With Section 113P Of Chapter 175 Of The Massachusetts General Laws

Article I - Authority

This regulation is promulgated in accordance with the authority granted the board of appeal on motor vehicle liability policies and bonds by Section 113P of Chapter 175 of the General Laws.

Article II - Definitions

(2.1) "Center Line", the marker, imaginary or drawn, which divides the middle of a road to separate traffic moving in opposite directions.

(2.2) "Merit Rating", the varying of insurance rates and premiums for private passenger vehicles, as defined in Regulation 9-76 of the Division of Insurance, on the basis of accidents and convictions pursuant to the provisions of Section 113P of Chapter 175 of the General Laws.

(2.3) "Operator", any Massachusetts licensed driver or resident.

(2.4) "Vehicle Subject to Merit Rating", a private passenger vehicle, as defined in Regulation 9-76 of the Division of Insurance, which is not specifically excepted in Section 4.1 of Regulation 9-76.

Article III - Purpose and Scope

The standards established by this regulation shall be used by insurers and the board of appeal on motor vehicle liability policies and bonds, hereinafter referred to as the board, in determing fault in excess of 50% for the purpose of Merit Rating. The presumptions raised in the situations described in Article IV shall be conclusive as to fault in excess of 50% except where a clear showing to the contrary, based on substantial evidence, is demonstrated at a hearing in accordance with the rules of the board.

Article IV - Situations in Which Fault is in Excess of 50%

Section 4.1 - Lawfully Parked Vehicle

The Operator of a Vehicle Subject to Merit Rating which strikes a lawfully parked vehicle shall be presumed to be at fault in excess of 50%.

Section 4.10 - Moving The Wrong Direction on a One-Way Street

An Operator of a Vehicle Subject to Merit Rating which strikes another vehicle while being operated in the wrong direction on a one-way street or highway shall be presumed to be at fault in excess of 50%.

Section 4.11 - Intersection Collision

An Operator of a Vehicle Subject to Merit Rating which strikes another vehicle in an intersection, both vehicles having entered the intersection at the same time, shall be presumed to be at fault in excess of 50% if such Operator's Vehicle entered the intersection from the left of the other vehicle.

Section 4.12 - Intersection Collision Involving Different Times of Entry

An Operator of a Vehicle Subject to Merit Rating which strikes another vehicle in an intersection shall be presumed to be at fault in excess of 50% if such Operator's Vehicle enters the intersection at a later point in time.

Section 4.13 - Failure to Stop at Red Light

An Operator of a Vehicle Subject to Merit Rating who fails to stop for a red light and whose Vehicle strikes another shall be presumed to be at fault in excess of 50%.

Section 4.14 - Backing Up

An Operator of a Vehicle Subject of Merit Rating which strikes another vehicle while being operated in reverse gear shall be presumed to be at fault in excess of 50%.

Section 4.15 - Illegal U-Turn

An Operator of a Vehicle Subject to Merit Rating which strikes another Vehicle while making an illegal U-turn shall be presumed to be at fault in excess of 50%.

Section 4.16 - Left Turn Collision with Vehicle Moving in the Opposite Direction

An Operator of a Vehicle Subject to Merit Rating which, in the process of making a left turn, strikes another vehicle which is moving in the opposite direction shall be presumed to be at fault in excess of 50%.

Section 4.17 - Entry From a Parked Position, Parking Lot, Alley, or Driveway

An Operator of a Vehicle Subject to Merit Rating which strikes another vehicle while entering from a parked position, parking lot, alley, or driveway shall be presumed to be at fault in excess of 50%.

Section 4.26 - Collision Occurring at the Intersection of Arterial Highways

An Operator of a Vehicle Subject to Merit Rating which strikes another vehicle which is on an arterial highway while such Operator's Vehicle is approaching from another highway shall be presumed at fault in excess of 50%.

Section 4.27 - Failure to Obey the Rules and Regulations for Driving on State Highways

An Operator of a Vehicle Subject to Merit Rating who fails to obey the Rules and Regulations for Driving on State Highways, as adopted by the Department of Public Works in accordance with the provisions of Section 2 of Chapter 85 of the General Laws and whose Vehicle strikes another shall be presumed to be at fault in excess of 50%.

Section 4.28 - Violation of Chapters 85, 89 or 90 of the General Laws

An Operator of a Motor Vehicle subject to Merit Rating who violates any provisions of Chapters 85, 89 or 90 of the General Laws and whose Vehicle strikes another shall be presumed to be at fault in excess of 50%.

Section 4.29 - Failure to Give Right-of-Way to Emergency Vehicles

An Operator of a Vehicle Subject to Merit Rating who does not give the right-of-way to emergency Vehicles as required by Section 7 of Chapter 89 of the General Laws and whose Vehicle strikes another shall be presumed to be at fault in excess of 50%.

John Douglas Cummings, Chairman

John F. Haddigan, Member

Arthur G. Moquin, Member

Attest: Ralph A. Iannaco

sentation in the application for insurance or renewal thereof, or unless the operator's license or motor vehicle registration of the named insured or of any other person who resides in the same household as the named insured and who usually operates a motor vehicle insured under the policy has been under suspension or revocation during the policy period, or for coverages which insurers refuse to offer under the provisions of paragraph (A) of section one hundred and thirteen H. Every company cancelling an insurance policy under authority of this paragraph shall, upon demand, refund within thirty days all money due to the insured as the result of such cancellation. Any company violating the provisions of the preceding sentence shall be liable to the insured in an action of contract for double the amount of the refund plus reasonable legal fees.

SECTION 9. Said chapter 175 is hereby further amended by striking out section 22E, as most recently amended by section 9 of said chapter 266, and inserting in place thereof the following section:-

Section 22E. No insurance company, and no officer or agent thereof in its behalf, shall refuse to issue, renew or execute as surety a motor vehicle liability policy or bond, or any other insurance based on the ownership or operation of a motor vehicle because of age, sex, race, occupation, or principal place of garaging of the vehicle. A particular company may make a general reduction in volume of automobile insurance in the commonwealth if such a reduction is determined by the commissioner not to be an attempt to circumvent the purposes of this section and that the company's refusal to write motor vehicle liability policies or bonds is not contrary to the public interest by disrupting the market for said insurance in the commonwealth. Any company which does not intend to issue a renewal policy shall give written notice of its intent not to issue a policy for the ensuing policy period in accordance with the provisions of section one hundred and thirteen F and such notice shall specify the reasons for such nonrenewal.

SECTION 10. Section 113B of said chapter 175, as most recently amended by chapter 401 of the acts of 1979, is hereby further amended by inserting after the second sentence the following sentence:- In fixing and establishing premium charges in accordance with the provisions of this section, the deficit of the plan, established under section one hundred and thirteen H, shall not be distributed to risks based on classification or territory.

SECTION 11. Said section 113B of said chapter 175, as most recently amended by said chapter 401, is hereby further amended

by inserting after the fifth paragraph the following six paragraphs:-

In so fixing and establishing classifications of risks under this section, the commissioner shall establish a safe driver insurance plan to equitably reflect the driving records of insureds. Such plan shall reflect an adjustment of insurance premium based on at-fault accidents, convictions of moving violations of motor vehicle laws, including payments pursuant to chapter ninety C, or any combination thereof, and based on four or more comprehensive claims totalling two thousand dollars or more, unless fire, theft, comprehensive and collision coverages are not purchased by the insured, as compiled and recorded by the motor vehicle insurance merit rating board established pursuant to section one hundred and eighty-three of chapter six.

Such an adjustment shall reflect an aggregate credit to safe drivers' premiums, which shall equal the increase in aggregate premiums to be charged to those not defined as safe drivers, categorized under the safe driver plan.

No safe driver insurance plan shall use any records or factors which occurred more than three years prior to the policy year for which an adjustment of insurance cost is reflected.

The commissioner shall establish reasonable rules to assure that all insureds are informed of any premium adjustments, and the reasons therefore, made as the result of this safe driver insurance plan.

If the method of operation of any company other than those operating pursuant to the so-called American Agency System results in excessive profits above nine per cent return on its earned premiums averaged over three years, the commissioner shall order a refund or dividend to current policyholders in the amount of such profit attributable to the difference between the amount allowed for expenses including acquisition costs in the rates for motor vehicle insurance and the company's actual expenses including acquisition costs incurred over the same three year period, provided such profits have not been previously returned to the holders of policies issued by such company.

In so fixing and establishing premium charges to be used and charged in accordance with the provisions of this section, the commissioner shall consider, in establishing said rates, the reduction of fraud achieved through the entity created pursuant to section one hundred and thirteen H.

SECTION 12. The first sentence of the second paragraph of section 113C of said chapter 175, as most recently amended by section 3 of chapter 707 of the acts of 1975, is hereby further amended by striking out, in line 1, the word "No" and inserting in place thereof the words:- Except for coverages which insurers

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MASSACHUSETTS AUTOMOBILE RATING AND ACCIDENT PREVENTION BUREAU
40 Broad Street, Boston, Massachusetts 02109
(617) 542-5080

December 1, 1983

Honorable Peter Hiam
Commissioner of Insurance
Commonwealth of Massachusetts
Department of Banking and Insurance
100 Cambridge Street
Boston, Massachusetts 02202

Dear Commissioner Hiam:

On behalf of the Massachusetts Automobile Rating and Accident Prevention Bureau, I hereby submit our recommendations with respect to 1984 Safe Driver Insurance rating values.

Sincerely yours,

George D. Morison
President

GDM/lap

Enclosure

AUTOMOBILE INSURANCE RATE FILING

OF THE

MASSACHUSETTS AUTOMOBILE RATING AND ACCIDENT PREVENTION BUREAU

PRIVATE PASSENGER AUTOMOBILE
1984 SAFE DRIVERS INSURANCE PLAN RATING VALUES

(Line of Business)

DECEMBER 1, 1983

(Date of Filing)

#1358
Massachusetts Automobile Rating and Accident Prevention Bureau
1984 Safe Driver Insurance Plan Rating Values
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#1357

1984 Massachusetts Private Passenger Automobile Safe Driver Insurance Plan Rating Values
Summary of Recommendations

The automobile insurance reform legislation enacted in July 1983 (c. 241, St. 1983) requires the Commissioner of Insurance to "establish a safe driver insurance plan to equitably reflect the driving records of insureds."[1] Accordingly, the Commissioner conducted a public hearing on August 22, 1983 to hear "evidence and testimony relating to the design of a safe driver plan to be used in fixing and establishing automobile insurance rates."[2] At that Hearing, Howard Mahler (Director of the State Rating Bureau) presented the recommendations of the committee that had been formed by the Division of Insurance to investigate and evaluate different options available to the Commissioner in the design of the Safe Driver Insurance Plan (SDIP). Other interested parties also provided various suggestions as well as comments on the committee's recommendations.[3] Subsequently, on November 2, 1983 the Commissioner's office released an outline of the "salient features" of the 1984 Safe Driver Insurance Plan.[4] That outline (included here in Appendix B) did not address the numerous

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[1] c. 241 § 11; see Appendix A.

[2] July 29, 1983 Notice of Hearing.

[3] Several interested groups, including the AG, the MARB, and the SRB also provided additional written recommendations after the Hearing.

[4] That outline was amended on November 29, 1983, changing the credit eligibility of inexperienced drivers.

administrative and procedural details of the plan, nor did it provide the rating values, i.e., credit and surcharge amounts. The administrative and procedural questions presumably will be resolved by a detailed regulation. The purpose of this filing is to recommend rating values.

The analysis by the MARB, AG, and SRB of the Safe Driver Insurance Plan identified several ratemaking issues that need to be addressed:

a) Surcharge amounts, by point, for surcharged operators, given the definition of points contained in the SDIP

b) The possible application of a surcharge to the "no credit-no surcharge" group of drivers that is created by the SDIP.

c) The magnitude of the percentage credits off PDL premiums for eligible "clean" drivers.

d) The imbalance of SDIP credits and surcharges in individual class-territory cells and possible corrective adjustments that could be effected.

e) The impact of the SDIP on the Residual Market deficit and on the provision in the rates for that deficit.

The MARB, SRB, and AG have discussed each of these issues and have reached a consensus on a number of elements of the actuarial analysis. This filing presents the MARB's recommendations on each issue; many of these recommendations will be in accord with the filings of the AG and SRB. The MARB's recommendations are summarized in Exhibit 1[5] and detailed in the following comments and the attached exhibits.

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[5]Exhibit 1 also provides examples of the impact on several "typical" drivers of the recommended SDIP rating values.

Surcharge amounts

The actuarial analysis of surcharge amounts for drivers with "k" points essentially focuses on the question: "How much higher is the expected average claim frequency for drivers with "k" SDIP points than for drivers with zero SDIP points, and what will be the additional cost to the insurance system of this higher average claim frequency?" The surcharge amounts are intended to allocate to these "k point" drivers the additional costs that they generate.

No data presently exist that exactly mirror the Safe Driver Plan and provide the differential claim frequencies necessary to answer the above question. However, due to the many similarities of the SDIP to the former Merit Rating System, the Merit Rating Board (MRB) database offered a source of reasonable proxy exposure and claim frequency data. The proxy data used to evaluate appropriate surcharge amounts is described in Appendix C and Exhibit 8.

Exhibit 8 also describes the MARB's analysis of this data, to make the data mirror as closely as possible the SDIP, and to distinguish real claim frequency variations by SDIP point from apparent or spurious patterns of claim frequency differences from one SDIP point level to the next.

The identified claim frequency differences between the various point levels are converted in Exhibit 2 to surcharge amounts by applying to the claim frequency differences a "premium per at-fault accident" determined in Exhibit 6. Finally, the indicated surcharges are smoothed judgmentally to produce the

recommended surcharges by SDIP point, as displayed in Exhibits 1 and 2.

Interestingly, the AG and the SRB, beginning with the same MRB data but using different methods of analysis, have produced similar surcharge patterns, although with some differences in magnitude.

Treatment of "no credit-no surcharge" drivers

The SDIP creates a large class of drivers that receive neither surcharges nor credits. This group of drivers, defined in Appendix B, typically is composed of:

- drivers with one or more surchargeable incidents[6] in the three year experience period, but no offenses in the most recent year or years;

- drivers who have one or more surchargeable incidents in the three year experience period, but have already paid for those incidents under Merit Rating;[7]

- inexperienced (0-3 years) principal operators with no surchargeable incidents.

The treatment of these drivers may be the most difficult issue before the Commissioner in connection with SDIP rating values. The following considerations are of importance:

a) The SDIP proxy data provided by the MRB indicates that the "no credit-no surcharge" group of drivers has an expected claim frequency significantly higher than the statewide average claim frequency (see Exhibits 2 and 8) and thus the application of a surcharge to this group is justified actuarially. MARB's analysis suggests that the indicated surcharge above the statewide average rate is substantial: $54.

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[6]Other than Driving Under the Influence, Driving to Endanger, or Vehicular Homicide.

[7]This is a temporary provision to smooth the transition from Merit Rating to the SDIP.

b) The designation of this group as a "no credit-no surcharge" class suggests that the intent is to charge the average rate, not a surcharged rate, to these drivers, the actuarial indications notwithstanding.

c) The application of a surcharge to these drivers has the effect of creating a larger apparent credit for clean drivers. That is, the clean driver credit off the "no credit-no surcharge" premium may be increased; however, because the "no credit-no surcharge" premium also has been increased, the net rate paid by a clean driver would not be decreased nearly as much as is suggested by the change in the apparent credit. Exhibit 1 Page 2 illustrates the total premiums paid by clean drivers (and by other drivers) under two scenarios: one in which "no credit-no surcharge" drivers are not surcharged, and one scenario in which these drivers are surcharged $54. Note that one effect of creating a larger apparent credit is that the total cost of a driver's first SDIP point -- including the loss of credit and the application of a $50 surcharge -- is also increased.

d) The Attorney General may recommend that some surcharge be imposed on "no credit-no surcharge" drivers indirectly by adjusting the PDL manual rates upward. The MARB has investigated such an approach (in the "Hypothetical Alternative" SDIP values displayed in Exhibit 1 and elsewhere in the filing) and concludes that it is unlawful. St. 1983, c. 241 § 11 clearly states that the SDIP "shall reflect an aggregate credit to safe drivers' premiums which shall equal the increase in aggregate premiums to be charged to those not defined as safe drivers." If the "no credit-no surcharge" surcharge is buried in the PDL rates, then the amounts identified as surcharges will not equal in the aggregate the amounts identified as credits, and thus will not conform to the statue.

It is MARB's position that to identify a group as receiving no SDIP credit and no SDIP surcharge, and then to hide a surcharge in that group's basic premium, would be deceptive at best and unlawful at worst. The only two approaches that the MARB considers acceptable are:

- Imposing no explicit or implicit surcharge on the "no credit-no surcharge" group (this approach is identified

as "MARB Proposal" in Exhibit 1 and elsewhere), charging that group the average rate.[8]

- Imposing an explicit surcharge on this group. This approach is actuarially justified but would require a rewording of the SDIP.

Credit percentage

The credit percentage applied to the PDL premiums of clean drivers is determined mechanically after the surcharge amounts (above) are determined. This mechanical calculation depends on estimates of the number of exposures at the various point levels in 1984 (see Exhibit 9 and Exhibit 2 page 2) and on the projection of a surcharge collection rate (see Exhibit 7 and Exhibit 2). Finally, an adjustment is required to determine a credit percentage that applies to total PDL premium rather than to basic limits PDL premium.

The MARB anticipates little dispute about the calculation of credits, once the surcharge amounts are determined for the "surcharged" and "no credit-no surcharge" groups of drivers.

Balancing the SDIP and PDL Rates by Cell

Although the SDIP credit and surcharge amounts paid in total will offset one another statewide, they may not be offsetting in an individual class-territory cell.[9]

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[8]The balancing of SDIP surcharges and credits and PDL rates by class and territory will create "no credit-no surcharge" rates that differ from the average rates in individual cells, but this group will have no statewide aggregate surcharge or credit under the MARB proposal.

[9]For example, in inexperienced principal operator cells, where surcharges but no credits apply.

The MARB (and, we understand, the AG and SRB) recommends that the PDL rates in each cell be adjusted to produce the same total dollars after the SDIP (including SDIP credits and surcharges) as would have been generated in the cell prior to the SDIP. Exhibit 3 details the MARB's proposed algorithm for this balancing process.

Impact of the SDIP on the Residual Market Deficit

The Safe Driver Plan will impact the total premiums paid by policyholders in the Residual Market, principally because surcharged drivers are concentrated in the Residual Market, while "credit" drivers are concentrated in the voluntary market. Thus, the SDIP will increase the Residual Market premiums and reduce the Residual Market deficit.

Exhibit 4 details the estimation of the magnitude of this effect (about $8 million under the MARB proposal, or about $6 per voluntary policyholder) and the manner in which the Residual Market loading component of the rates should be adjusted.

Conclusion

It appears likely that the parties will agree as to the appropriate 1984 SDIP surcharge amounts and as to the substantial details of the calculation of the credit percentage, the balancing process by class and territory, and the adjustment of the Residual Market deficit rate component. The MARB approach to these elements of the analysis is detailed in this filing, and the MARB will review and attempt to reconcile any different approaches presented by the AG or SRB.

The most important SDIP rating decision before the Commissioner probably will be the question of whether to apply a surcharge to the "no credit-no surcharge" operators. The MARB recommends that no such surcharge be applied; the MARB recommendation is in accord with the statute (St. 1983, c. 241) and the apparent intent to designate a group of drivers subject neither to credits nor to surcharges. Furthermore, the MARB proposed approach yields reasonable premium impacts for drivers being charged their first point. Finally, however, if the "no credit-no surcharge" drivers are to be surcharged, such surcharges must be explicit; not hidden in the base rates.

#1342

Exhibit 1
Page 1

1984 MASSACHUSETTS PRIVATE PASSENGER AUTOMOBILE SAFE DRIVER INSURANCE PLAN RATING VALUES SUMMARY OF RECOMMENDATIONS

	SDIP Points	MARB Proposal	Hypothetical Alternative
I. Surcharge Amounts (Exhibit 2) (these amounts are added to the "no credit - no surcharge" premiums to determine premiums for surcharged policies)	1	$ 50	$ 50
	2	100	100
	3	150	150
	4	225	225
	5	300	300
	6	375	375
	7	450	450
	8	525	525
	Over 8	675	675
II. Additional Surcharge (above the average rates) applied to "no credit - no surcharge" premiums (Exhibit 2)[1]		$0	$54
III. Clean Driver Credit (Exhibit 2)			
Average Dollar Amount		$14	$92[2]
Percentage of PDL Premium		11.6%	52.3%[2]

IV. Balancing by Class-Territory

MARB recommends that the final PDL premiums by class and territory be adjusted so that the total premium income by class and territory is the same after the SDIP (including SDIP credits and surcharges) as before. The recommended algorithm is detailed in Exhibit 3.

V. Impact on the Residual Market Deficit

MARB recommends that the Residual Market Deficit loading in the rates be adjusted to reflect any anticipated change in Residual Market premium due to the SDIP. The recommended algorithm is detailed in Exhibit 4.

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[1] Applying this surcharge to the "no credit - no surcharge" premium has the effect of applying it to every driver's premium, since all premiums are a function of the "no credit - no surcharge" premium.

[2] Assumes credit is a deduction from the entire "no credit - no surcharge" premium, including the $54 surcharge.

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Exhibit 1
Page 2

1984 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Rating Values
Summary of Recommendations

Territory	Class	Points	Prior to SDIP	MARB Proposal	Hypothetical Alternative
12	10-15 (Average rates)	Credit	$127	114	94
		0 ("No Credit-No Surcharge")	127	129	198
		1	127	179	248
		2	127	229	298
1	10-15 (Low rates)	Credit	82	74	63
		0 ("No Credit-No Surcharge")	82	84	132
		1	82	134	182
		2	82	184	232
19	20-25 (High rates)	Credit	$331	Not eligible	Not eligible
		0 ("No Credit-No Surcharge")	331	320	320
		1	331	370	370
		2	331	420	420

rce: PDL Premiums Prior to SDIP: Exhibit 5A Page 1
PDL Premiums for "No Credit-No Surcharge":
MARB Proposal: Exhibit 5B Page 1
Alternative: Exhibit 5C Page 1 (includes $54 surcharge)

PDL Premiums for "Credit" Policies = "No Credit-No Surcharge"
premiums minus 11.6% (MARB Proposal) or 52.3% (Alternative)

PDL Premiums for Surcharged Policies = "No Credit-No Surcharge"
premiums plus $50 (1 point) or $100 (2 points)

1984 Massachusetts Private Passenger Automobile
Calculation and Selection of SDIP Surcharges and Credits

Points	Estimated 1984 Exposures[1]	Claim Frequency Increment Above/Below Statewide Average[2]	Indicated Surcharge/Credit Above/Below Statewide Average Rates[3]	Proposed Surcharge Above "No Credit-No Surcharge" Rate	Additional Surcharge (Above Average Rates) Applied to "No Credit-No Surcharge" Premiums[7]	
					MARB Proposal	Hypothetical Alternative
Credit	1881339	-.83	-$44			
0	565343	1.02	$54		0	$54
1	128214	1.74	92	$50		
2	105932	2.34	123	100		
3	20318	5.48	288	150		
4	14729	5.11	268	225		
5	5337	8.27	434	300		
6	2806	7.47	392	375		
7	1191	11.37	597	450		
8	952	8.49	446	525		
Over 8 (10)	1195	18.13	952	675		

	Clean Driver Credit[4]	
Estimated Clean Driver Credit below "No Credit-No Surcharge" Premiums - Dollars	$14	$92[6]
- % if Applied to Basic Limits PDL[5]	12.0%	54.1%[6]
- % if Applied to Total Limits PDL[5]	11.6%	52.3%[6]

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1 Exhibit 9A

2 Exhibit 8A
The average claim frequency increase per point (above 0) is

$$\Sigma_{i>0} ((\text{Exposure}_i \times i) \times ((\text{Frequency increment}_i - 1.02)/i))/(\Sigma_{i>0} (\text{Exposure}_i \times i)) = .90$$

3 (Claim Frequency increment) x ($5252 average premium per at-fault accident (Exhibit 6))/100

4 Exhibit 2 Page 2

5 Percentage applied to Total limits PDL Premium =
Percentage applied to Basic Limits Premium/(Average PDL ILF including Basic Limits only buyers)
Average PDL ILF (MARB filing) = 1.0 + .040 x 2417708/2727401 = 1.035

6 Assumes credit applies to entire "no credit-no surcharge" premium, including the $54 surcharge.

7 Applying this surcharge to the "no credit-no surcharge" premium has the effect of applying it to every driver's premium, since all premiums are a function of the "no credit-no surcharge" premium.

#1331

Exhibit 2
Page 2

1984 Massachusetts Private Passenger Automobile
Calculation of Clean Driver Credits

	MARB Proposal	Alternative
1. PDL Premium income prior to SDIP		
a. Exposures (Exhibit 9B)	2727354	2727354
b. Average PDL Rate (MARB filing; see Ex.5A p.1)	127.57	127.57
c. Premium = (a) x (b)	347,928,550	347,928,550
2. Surcharge income for SDIP points		
a. Σ(Exposures x Proposed Surcharges) from Exhibit 2 Page 1	27,861,350	27,861,350
b. Collection Rate (Exhibit 7)	.95	.95
c. Collectible Surcharges (a) x (b)	26,468,282	26,468,282
3. Additional charge to be added to all premiums		
a. Amount of extra charge (Ex.2 p. 1)	0	$54
b. Resulting income = (a) x (1a)	0	$147277116
4. Credit amount		
a. Total income prior to SDIP (1c)	347,928,550	347,928,550
b. Total income after SDIP (1c)+(2c)+(3b)	374,396,832	521,673,948
c. Available for credits (b) - (a)	26,468,282	173,745,398
d. Credit exposures (Ex.2 Page 1)	1881339	1881339
e. Average credit amount off "no credit-no surcharge" premium (c)/(d)	$14.07	$92.35
f. Average PDL basic limits premium for credit exposures ($116.85 prior to SDIP (Exhibit 5A p.2)) plus (3a)	$116.85	$170.85
g. Credit percentage, if applied only to PDL Basic Limits premium (e)/(f)	12.0%	54.1%

#1332

Exhibit 3
Page 1

1984 Massachusetts Private Passenger Automobile
Balancing the SDIP and PDL Rates by Class-Territory

After the SDIP surcharge amounts and credit percentage are selected, the PDL manual rates in each class-territory cell are adjusted so that the total income (rates, plus surcharges, less credits) in each cell will be the same as in the absence of the SDIP. This exhibit describes the procedure to be applied to each class-territory cell separately.

Illustrative actual calculations according to this procedure are reflected in Exhibit 5B pp. 1-2 (using 12% credit) and Exhibit 5C pp. 1-2 (using 54% credit). The numerical effects of the calculation are dependent on the selected surcharge and credit amounts and the PDL rates. Therefore, these calculations will have to be performed with the appropriate parameters from the Commissioner's Decision.

Also, the Residual Market deficit adjustment described in Exhibit 4 may impact the balanced achieved by the process described in Exhibit 3, so that several iterations of the Exhibit 3 and Exhibit 4 procedures may be required for the adjustments to converge. Only the first iterations is illustrated in this filing.

Notation:

E_s denotes total market exposures, by surcharge level, in a single class-territory cell (Exhibit 9A)

E denotes total exposures in the class-territory cell = ΣE_s

s = -1 denotes credit exposures
0 denotes "no credit-no surcharge" exposures
>1 (by number) denotes surcharge exposures

S_s denotes selected surcharge amounts, by point (Exhibit 2 Page 1)

s	S_s
1	50
2	100
3	150
4	225
5	300
6	375
7	450
8	525
Over 8	675

C denotes the credit percentage, expressed as a percentage of PDL basic limits rate

MARB Proposal: C = 12%
Alternative : C = 54%

P denotes the anticipated collection rate on billed surcharges. P = .95 (Exhibit 7).

OR denotes the PDL rate in the class-territory cell, prior to this balancing process. (Exhibit 5A (based on 1984 MARB filing))

NR denotes the balanced PDL rate in the class-territory cell.

All the above quantities are known, except NR. Solve for NR to satisfy the following equality:

Old Premium = New Premium

$$E \times OR = (E \times NR) - (E_{-1} \times NR \times C) + (\Sigma_{s>0} (E_s \times S_s \times P))$$

$$NR \times (E - (C \times E_{-1})) = (E \times OR) - (\Sigma_{s>0} (E_s \times S_s \times P))$$

$$NR = \frac{(E \times OR) - (\Sigma_{s>0} (E_s \times S_s \times P))}{(E - (C \times E_{-1}))}$$

The resulting rates (NR) are shown in Exhibit 5B page 1 (based on the 12% credit) and in Exhibit 5C page 1 (based on the 54% credit). The differences between the balanced PDL rates (NR) and the PDL rate prior to balancing (OR), by class and territory, are shown in Exhibit 5B Page 2 and Exhibit 5C Page 2. The adjusted rates in Exhibit 5C include the $54 surcharge indicated by the "alternative" proposal (see Exhibit 1).

#1335 Exhibit 4

1984 Massachusetts Private Passenger Automobile
Calculating the Impact of the SDIP on the Residual Market Deficit

The Safe Driver Insurance Plan will have two impacts on the total premiums paid by the population of Residual Market policyholders, and thus on the Residual Market Deficit. This Residual Market Deficit is a separately identified component of the total market loss pure premium (MARB 8/12/83 filing, Section 100A) and is loaded "flat" in the class-territory rate calculations.[1] Therefore, a change in the estimated amount of this deficit will affect class-territory rate calculations (but have no rate level effect).

The two SDIP impacts on total Residual Market premiums are: first, the Residual Market includes relatively more surcharged drivers and relatively fewer "clean" drivers than does the total market, so that residual market premiums will be increased by the amount of surcharge income less credit allowances to Residual Market policyholders; second, the balancing of PDL rates by class and territory (Exhibit 3) may change the average PDL rate paid by Residual Market policyholders.

Exhibit 4a illustrates the method of quantifying this effect.[2] The basic procedure is to calculate total Residual

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[1] In the past, MARB has recommended that this loading vary by territory and class. St. 1983, c. 241 §10 now mandates the flat loading which the Commissioner has used, and the MARB opposed, in recent years.

[2] The changes in class-territory rates produced by this
(Footnote Continued)

Market PDL premium before the Safe Driver Plan (Exhibit 4a line (1c)) and the total Residual Market PDL premium after the SDIP, including the effects of surcharges and credits. (Exhibit 4a line (2h)). The difference (Exhibit 4a line 3a)) is the reduction in the Residual Market Deficit due to the SDIP.[3]

On the remaining lines of Exhibit 4a, the impact of this reduction on the pure premium rate components for all coverages and for PDL specifically is shown.[4]

These revised rate components would be used to recalculate the PDL rates by class and territory.

(Footnote Continued)
adjustment of the Facility Deficit require a second iteration of the balancing process described in Exhibit 3, which in turn further affects the Facility Deficit. Several iterations of the calculations and adjustments described in Exhibits 3 and 4 may be required for the adjustments to converge.

[3]This effect varies according to whether the MARB proposal or an alternative proposal of surcharges and credits is adopted, and also depends on the Commissioner's rate components. Thus, the calculations presented in Exhibits 4 are illustrative of the MARB's proposed methodology but will have to be prepared again with the Commissioner's Decision parameters.

[4]A similar effect would be applied to the components of all coverages.

#1354 Exhibit 4a

1984 Massachusetts Private Passenger Automobile
Calculating the Impact of the SDIP on the Residual Market Deficit

First Iteration	MARB Proposal	Alternative
(1) Residual Mkt. Premium prior to SDIP		
(a) Residual Mkt. exposures (Ex. 10D)	1269293	1269293
(b) Avg. PDL rate, prior to SDIP, on Residual Market exposures (Ex. 5A, p. 3)	143.13	143.13
(c) Residual Mkt. PDL premium prior to SDIP (a)x(b)	181673907	181673907
(2) Residual Mkt. Premium after SDIP		
(a) Avg. PDL rate, after balancing for SDIP, on Residual Market exposures (Ex. 5B, 5C, p.4)	142.28	197.94
(b) Residual Mkt. PDL premium (1a)x(2a)	180595008	251243856
(c) SDIP credit Residual Market exposures (Ex. 10A)	696095	696095
(d) Avg. PDL rate, after balancing for SDIP, on SDIP credit Residual Mkt. exposures (Ex. 5B, 5C, p. 5)	125.39	186.54
(e) Clean driver credit, expressed as a percentage of PDL basic limits rate (Ex. 2, page 1)	12%	54%
(f) Clean driver credit dollars =(c)x(d)x(e)	10474002	70118763
(g) Residual Mkt. SDIP surcharge income (Exhibit 4b)	19868561	19868561
(h) Total Residual Mkt. PDL Premium after SDIP (b)-(f)+(g)	189989567	200993654
(3) Impact of SDIP on Residual Mkt. Deficit		
(a) Change in Residual Mkt. PDL premium due to SDIP (2h)-(1c)	8315660	19319747
(b) Total Residual Mkt. deficit loading prior to SDIP (Exhibit 4c)	172866111	172866111
(c) Impact of SDIP on Residual Mkt. Deficit 1.0-(a)/(b)	.952	.888
(d) Average Deficit loading prior to SDIP (Exhibit 4c)	118.56	118.56
(e) Average Deficit loading after SDIP (c)x(d)	112.87	105.28
(f) PDL rate components before SDIP (Form 100)		
i. Total Market	84.33	84.33
ii. Residual Market	20.53	20.53
iii. Voluntary Market (i)-(ii)	63.80	63.80
(g) PDL rate components after SDIP		
i. Total Market = (f.i.)	84.33	84.33
ii. Residual Market = (f.ii.)x(c)	19.54	18.23
iii. Voluntary Market = (i)-(ii)	64.79	66.10

#1336 Exhibit 4b

1984 Massachusetts Private Passenger
Estimated Residual Market SDIP Income

Points	Estimated Residual Market Exposure (Exhibit 10)	Surcharge Amount (Exhibit 2 Page 1)
1	87827	50
2	76271	100
3	15340	150
4	11636	225
5	4403	300
6	2413	375
7	1066	450
8	885	525
Over 8	1195	675

Total potential Residual Market SDIP Surchange Income	20914275
Collection Rate (Exhibit 7)	.95
Estimated Residual Market SDIP Surcharge Income	19868561

#1337

Exhibit 4c

1984 Massachusetts Private Passenger Automobile
Calculation of Residual Market Deficit Loading Prior to SDIP

Coverage	Voluntary Exposures**	Residual Market Deficit Pure Premium*
A-1	1458103.5	18.21
A-2	1372155.7	3.45
B, basic	1458103.5	4.06
B, incr (.897)	1194332.6**	19.98
PDL, basic	1458103.5	20.53
PDL, incr (.040)	1309960.2**	.82
Collision	849263.0	35.76
Ltd. Collision	180861.1	1.28
D	763908.3	2.95
Comprehensive	1096783.2	34.81
U	1458103.5	6.69
Total Deficit Loading (MARB Filing)		$172866111
Average Deficit Loading (172866111/1458103.5)		118.56

* Voluntary market exposures are from MARB Filing, Section 100A.
Residual market deficit pure premium is from MARB Filing Form 100.

Voluntary exposures are used because the Residual Market loading is expressed as an amount per voluntary exposure (see MARB 8/12/83 filing, p. 23).

** Percentages of basic limits exposures, based on Data Base Reference 02V.

Exhibit 5

1984 Massachusetts Private Passenger Automobile
Calculation of Various PDL Rates
Based on MARB Filing Parameters

Exhibit 5A	PDL Rates Prior to SDIP
page 1	Averaged over total exposures
page 2	Averaged over Total Market SDIP credit exposures
page 3	Averaged over Residual Market exposures
Exhibit 5B	PDL Rates After Balancing for SDIP (Iteration #1; using MARB proposed surcharges and credits)
page 1	Averaged over total exposures
page 2	Impact of balancing, by cell (Ex. 5B page 1 minus 5A page 1)
page 3	Averaged over Total Market SDIP credit exposures
page 4	Averaged over Residual Market exposures
page 5	Averaged over Residual Market SDIP credit exposures
Exhibit 5C	PDL Rates After Balancing for SDIP (Iteration #1; using Alternative surcharges and credits)
page 1	Averaged over total exposures
page 2	Impact of balancing, by cell (Ex. 5C page 1 minus 5A page 1)
page 3	Averaged over Total Market SDIP credit exposures
page 4	Averaged over Residual Market exposures
page 5	Averaged over Residual Market SDIP credit exposures

PROPOSED 1984 RATES

PART 4 (PDL)

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	82.47	187.67	136.97	229.92	165.14	93.58	93.69
2	88.70	201.53	146.21	247.23	176.68	99.25	103.02
3	91.63	209.94	151.82	259.78	185.05	101.94	108.02
4	96.66	218.89	157.79	269.09	191.25	109.31	113.92
5	96.56	218.49	157.52	267.30	190.06	107.28	112.71
6	101.42	230.03	165.21	283.72	201.01	113.10	119.68
7	107.13	238.95	171.16	291.89	206.45	114.59	124.49
8	109.72	249.30	178.06	306.19	215.99	119.20	130.11
9	118.02	261.59	186.25	315.30	224.19	125.82	138.94
10	117.04	257.90	183.79	314.23	222.76	123.25	135.62
11	117.60	258.04	183.88	310.49	218.85	125.44	140.25
12	126.57	272.82	193.74	321.35	232.26	129.42	143.39
13	132.34	279.55	198.23	323.95	235.72	132.93	150.12
14	138.40	290.77	205.70	331.09	245.24	136.02	155.41
15	144.57	298.71	211.00	333.79	248.85	141.26	163.31
16	150.76	312.89	220.98	342.60	260.59	144.87	169.33
17	114.14	251.34	179.42	310.44	218.82	119.04	130.46
18	142.27	298.24	210.69	335.99	251.77	140.45	161.75
19	145.17	295.98	209.18	331.33	245.57	140.16	158.74
20	137.57	290.74	205.69	329.74	243.45	136.51	155.65
21	165.56	320.10	230.59	350.94	271.71	155.57	181.92
22	194.47	341.68	259.37	358.19	300.19	174.93	206.25
23	159.27	314.23	222.76	345.16	264.01	150.04	170.26
24	138.35	286.82	203.07	327.08	239.90	135.92	153.83
25	148.42	305.59	215.59	336.52	252.48	143.04	164.83
26	171.92	333.69	248.71	358.19	287.69	160.03	190.70
CLASS AVG.	110.00	243.26	173.34	293.29	207.61	116.64	127.57

Exhibit 5A
Page 1

PROPOSED PDL RATES WEIGHTED BY CREDIT EXPOSURES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	82.47	187.67	136.97	229.92	165.14	93.58	87.09
2	88.70	201.53	146.21	247.23	176.68	99.25	94.23
3	91.63	209.94	151.82	259.78	185.05	101.94	98.28
4	96.66	218.89	157.79	269.09	191.25	109.31	103.95
5	96.56	218.49	157.52	267.30	190.06	107.28	102.74
6	101.42	230.03	165.21	283.72	201.01	113.10	108.65
7	107.13	238.95	171.16	291.89	206.45	114.59	113.84
8	109.72	249.30	178.06	306.19	215.99	119.20	117.53
9	118.02	261.59	186.25	315.30	224.19	125.82	126.15
10	117.04	257.90	183.79	314.23	222.76	123.25	124.64
11	117.60	258.04	183.88	310.49	218.85	125.44	126.05
12	126.57	272.82	193.74	321.35	232.26	129.42	133.74
13	132.34	279.55	198.23	323.95	235.72	132.93	139.17
14	138.40	290.77	205.70	331.09	245.24	136.02	145.08
15	144.57	298.71	211.00	333.79	248.85	141.26	151.27
16	150.76	312.89	220.98	342.60	260.59	144.87	157.83
17	114.14	251.34	179.42	310.44	218.82	119.04	121.30
18	142.27	298.24	210.69	335.99	251.77	140.45	150.93
19	145.17	295.98	209.18	331.33	245.57	140.16	150.61
20	137.57	290.74	205.69	329.74	243.45	136.51	145.01
21	165.56	320.10	230.59	350.94	271.71	155.57	172.65
22	194.47	341.68	259.37	358.19	300.19	174.93	199.06
23	159.27	314.23	222.76	345.16	264.01	150.04	164.30
24	138.35	286.82	203.07	327.08	239.90	135.92	145.11
25	148.42	305.59	215.59	336.52	252.48	143.04	155.08
26	171.92	333.69	248.71	358.19	287.69	160.03	179.15
CLASS AVG.	109.92	243.96	173.31	1.00	207.70	116.59	116.85

PROPOSED 1984 PDL RATES WEIGHTED BY ESTIMATED FACILITY EXPOSURES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	82.47	187.67	136.97	229.92	165.14	93.58	106.55
2	88.70	201.53	146.21	247.23	176.68	99.25	118.27
3	91.63	209.94	151.82	259.78	185.05	101.94	123.20
4	96.66	218.89	157.79	269.09	191.25	109.31	129.24
5	96.56	218.49	157.52	267.30	190.06	107.28	127.09
6	101.42	230.03	165.21	283.72	201.01	113.10	134.96
7	107.13	238.95	171.16	291.89	206.45	114.59	137.98
8	109.72	249.30	178.06	306.19	215.99	119.20	144.78
9	118.02	261.59	186.25	315.30	224.19	125.82	152.58
10	117.04	257.90	183.79	314.23	222.76	123.25	147.96
11	117.60	258.04	183.88	310.49	218.85	125.44	153.17
12	126.57	272.82	193.74	321.35	232.26	129.42	153.24
13	132.34	279.55	198.23	323.95	235.72	132.93	158.87
14	138.40	290.77	205.70	331.09	245.24	136.02	162.32
15	144.57	298.71	211.00	333.79	248.85	141.26	169.03
16	150.76	312.89	220.98	342.60	260.59	144.87	174.61
17	114.14	251.34	179.42	310.44	218.82	119.04	139.27
18	142.27	298.24	210.69	335.99	251.77	140.45	169.13
19	145.17	295.98	209.18	331.33	245.57	140.16	162.73
20	137.57	290.74	205.69	329.74	243.45	136.51	162.92
21	165.56	320.10	230.59	350.94	271.71	155.57	184.95
22	194.47	341.68	259.37	358.19	300.19	174.93	207.92
23	159.27	314.23	222.76	345.16	264.01	150.04	173.97
24	138.35	286.82	203.07	327.08	239.90	135.92	159.28
25	148.42	305.59	215.59	336.52	252.48	143.04	168.87
26	171.92	333.69	248.71	358.19	287.69	160.03	194.89
CLASS AVG.	113.58	243.72	175.18	293.83	210.06	118.72	143.13

ADJUSTED PDL RATES (.12 CREDIT) WEIGHTED BY TOTAL MARKET EXPOSURES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	84.09	185.64	134.90	215.82	162.81	96.30	94.50
2	88.88	191.20	137.03	227.54	170.09	100.45	101.67
3	92.61	203.03	146.38	242.40	181.93	103.93	107.64
4	97.21	212.50	152.18	250.77	186.57	111.09	113.06
5	97.44	211.87	150.47	250.27	187.02	109.20	112.26
6	102.12	222.01	157.44	264.85	197.24	114.92	118.84
7	108.01	232.64	164.35	273.35	202.37	116.20	123.95
8	110.64	241.59	170.85	287.77	211.45	121.02	129.40
9	119.42	257.25	180.71	296.97	221.19	127.97	138.81
10	119.19	253.27	179.30	297.07	219.07	126.02	136.37
11	118.76	254.13	175.58	293.23	215.56	127.33	139.75
12	129.43	274.26	188.78	305.68	232.91	132.55	145.26
13	135.57	280.03	194.73	306.74	234.46	136.21	152.05
14	141.25	288.08	199.33	312.19	243.68	138.84	156.88
15	147.02	292.11	204.61	311.15	245.97	143.30	163.84
16	154.79	310.75	217.59	321.87	255.41	148.01	171.57
17	114.84	248.90	173.92	288.32	212.63	120.13	129.86
18	143.66	295.60	208.35	320.24	251.77	141.89	162.06
19	148.28	305.44	201.02	320.17	241.74	142.97	161.23
20	139.23	289.36	197.24	310.57	235.37	138.24	155.82
21	169.86	331.35	228.43	339.80	277.16	158.83	185.66
22	201.27	359.51	264.41	350.97	307.78	180.56	212.69
23	167.37	337.38	223.98	336.92	263.67	157.14	178.03
24	142.68	298.59	203.72	310.05	230.59	139.81	157.16
25	153.82	309.96	216.65	323.67	258.65	148.54	169.31
26	178.69	333.33	238.72	343.04	285.29	165.35	195.59
CLASS AVG.	111.45	238.53	167.21	275.61	204.26	118.81	127.63

ADJUSTED PDL RATES (.12 CREDIT) MINUS ORIGINAL PROPOSED PDL RATES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	1.62	-2.03	-2.07	-14.10	-2.33	2.72	.80
2	.18	-10.33	-9.18	-19.69	-6.59	1.20	-1.35
3	.98	-6.91	-5.44	-17.38	-3.12	1.99	.38
4	.55	-6.39	-5.61	-18.32	-4.68	1.78	-.86
5	.88	-6.62	-7.05	-17.03	-3.04	1.92	-.45
6	.70	-8.02	-7.77	-18.87	-3.77	1.82	-.84
7	.88	-6.31	-6.81	-18.54	-4.08	1.61	-.54
8	.92	-7.71	-7.21	-18.42	-4.54	1.82	-.71
9	1.40	-4.34	-5.54	-18.33	-3.00	2.15	-.14
10	2.15	-4.63	-4.49	-17.16	-3.69	2.77	.75
11	1.16	-3.91	-8.30	-17.26	-3.29	1.89	-.50
12	2.86	1.44	-4.96	-15.67	.65	3.13	1.86
13	3.23	.48	-3.50	-17.21	-1.26	3.28	1.93
14	2.85	-2.69	-6.37	-18.90	-1.56	2.82	1.47
15	2.45	-6.60	-6.39	-22.64	-2.88	2.04	.53
16	4.03	-2.14	-3.39	-20.73	-5.18	3.14	2.24
17	.70	-2.44	-5.50	-22.12	-6.19	1.09	-.60
18	1.39	-2.64	-2.34	-15.75	.00	1.44	.31
19	3.11	9.46	-8.16	-11.16	-3.83	2.81	2.49
20	1.66	-1.38	-8.45	-19.17	-8.08	1.73	.17
21	4.30	11.25	-2.16	-11.14	5.45	3.26	3.73
22	6.80	17.83	5.04	-7.22	7.59	5.63	6.44
23	8.10	23.15	1.22	-8.24	-.34	7.10	7.77
24	4.33	11.77	.65	-17.03	-9.31	3.89	3.33
25	5.40	4.37	1.06	-12.85	6.17	5.50	4.48
26	6.77	-.36	-9.99	-15.15	-2.40	5.32	4.89
CLASS AVG.	1.45	-4.74	-6.14	-17.68	-3.35	2.16	.06

ADJUSTED PDL RATES (.12 CREDIT) WEIGHTED BY TOTAL MARKET CREDIT EXPOSURES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	84.09	185.64	134.90	215.82	162.81	96.30	88.54
2	88.88	191.20	137.03	227.54	170.09	100.45	93.94
3	92.61	203.03	146.38	242.40	181.93	103.93	98.89
4	97.21	212.50	152.18	250.77	186.57	111.09	104.11
5	97.44	211.87	150.47	250.27	187.02	109.20	103.28
6	102.12	222.01	157.44	264.85	197.24	114.92	108.92
7	108.01	232.64	164.35	273.35	202.37	116.20	114.35
8	110.64	241.59	170.85	287.77	211.45	121.02	117.99
9	119.42	257.25	180.71	296.97	221.19	127.97	127.20
10	119.19	253.27	179.30	297.07	219.07	126.02	126.39
11	118.76	254.13	175.58	293.23	215.56	127.33	126.82
12	129.43	274.26	188.78	305.68	232.91	132.55	136.44
13	135.57	280.03	194.73	306.74	234.46	136.21	142.18
14	141.25	288.08	199.33	312.19	243.68	138.84	147.62
15	147.02	292.11	204.61	311.15	245.97	143.30	153.30
16	154.79	310.75	217.59	321.87	255.41	148.01	161.42
17	114.84	248.90	173.92	268.32	212.63	120.13	121.67
18	143.66	295.60	208.35	320.24	251.77	141.89	152.10
19	148.28	305.44	201.02	320.17	241.74	142.97	153.71
20	139.23	289.36	197.24	310.57	235.37	138.24	146.27
21	169.86	331.35	228.43	339.80	277.16	158.83	177.14
22	201.27	359.51	264.41	350.97	307.78	180.56	206.13
23	167.37	337.38	223.98	336.92	263.67	157.14	172.62
24	142.68	298.59	203.72	310.05	230.59	139.81	149.42
25	153.82	309.96	216.65	323.67	258.65	148.54	160.44
26	178.69	333.33	238.72	343.04	285.29	165.35	185.35
CLASS AVG.	111.37	239.46	167.21	1.00	204.40	118.76	117.96

ADJUSTED PDL RATES (.12 CREDIT) WEIGHTED BY TOTAL FACILITY EXPOSURES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	84.09	185.64	134.90	215.82	162.81	96.30	106.31
2	88.88	191.20	137.03	227.54	170.09	100.45	115.16
3	92.61	203.03	146.38	242.40	181.93	103.93	121.38
4	97.21	212.50	152.18	250.77	186.57	111.09	126.97
5	97.44	211.87	150.47	250.27	187.02	109.20	125.33
6	102.12	222.01	157.44	264.85	197.24	114.92	132.67
7	108.01	232.64	164.35	273.35	202.37	116.20	136.24
8	110.64	241.59	170.85	287.77	211.45	121.02	142.80
9	119.42	257.25	180.71	296.97	221.19	127.97	151.35
10	119.19	253.27	179.30	297.07	219.07	126.02	147.71
11	118.76	254.13	175.58	293.23	215.56	127.33	151.68
12	129.43	274.26	188.78	305.68	232.91	132.55	154.45
13	135.57	280.03	194.73	306.74	234.46	136.21	160.11
14	141.25	288.08	199.33	312.19	243.68	138.84	163.19
15	147.02	292.11	204.61	311.15	245.97	143.30	168.91
16	154.79	310.75	217.59	321.87	255.41	148.01	176.31
17	114.84	248.90	173.92	268.32	212.63	120.13	137.91
18	143.66	295.60	208.35	320.24	251.77	141.89	168.94
19	148.28	305.44	201.02	320.17	241.74	142.97	165.09
20	139.23	289.36	197.24	310.57	235.37	138.24	162.52
21	169.86	331.35	228.43	339.80	277.16	158.83	186.55
22	201.27	359.51	264.41	350.97	307.78	180.56	214.28
23	167.37	337.38	223.98	336.92	263.67	157.14	181.66
24	142.68	298.59	203.72	310.05	230.59	139.81	162.30
25	153.82	309.96	216.65	323.67	258.65	148.54	173.09
26	178.69	333.33	238.72	343.04	285.29	165.35	199.38
CLASS AVG.	115.24	239.03	169.07	276.16	206.82	120.98	142.28

ADJUSTED PDL RATES (.12 CREDIT) WEIGHTED BY FACILITY CREDIT EXPOSURES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	84.09	185.64	134.90	215.82	162.81	96.30	92.90
2	86.88	191.20	137.03	227.54	170.09	100.45	98.23
3	92.61	203.03	146.38	242.40	181.93	103.93	103.48
4	97.21	212.50	152.18	250.77	186.57	111.09	109.10
5	97.44	211.87	150.47	250.27	187.02	109.20	107.67
6	102.12	222.01	157.44	264.85	197.24	114.92	113.53
7	108.01	232.64	164.35	273.35	202.37	116.20	118.35
8	110.64	241.59	170.85	287.77	211.45	121.02	122.35
9	119.42	257.25	180.71	296.97	221.19	127.97	131.48
10	119.19	253.27	179.30	297.07	219.07	126.02	130.23
11	118.76	254.13	175.58	293.23	215.56	127.33	131.13
12	129.43	274.26	188.78	305.68	232.91	132.55	139.83
13	135.57	280.03	194.73	306.74	234.46	136.21	144.93
14	141.25	288.06	199.33	312.19	243.68	138.84	149.70
15	147.02	292.11	204.61	311.15	245.97	143.30	154.68
16	154.79	310.75	217.59	321.87	255.41	148.01	162.94
17	114.84	248.90	173.92	288.32	212.63	120.13	124.37
18	143.66	295.60	208.35	320.24	251.77	141.89	154.54
19	148.28	305.44	201.02	320.17	241.74	142.97	155.12
20	139.23	289.36	197.24	310.57	235.37	138.24	148.46
21	169.86	331.35	228.43	339.80	277.16	158.83	178.11
22	201.27	359.51	264.41	350.97	307.78	180.56	206.67
23	167.37	337.38	223.98	336.92	263.67	157.14	174.39
24	142.68	298.59	203.72	310.05	230.59	139.81	151.70
25	153.82	309.96	216.65	323.67	258.65	148.54	161.93
26	178.69	333.33	238.72	343.04	285.29	165.35	186.69
CLASS AVG.	115.15	239.99	169.11	1.00	206.96	120.94	125.39

ADJUSTED PDL RATES (.54 CREDIT) WEIGHTED BY TOTAL MARKET EXPOSURES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	132.06	258.84	184.64	215.82	222.84	151.23	141.74
2	135.09	253.02	179.97	227.54	223.41	152.69	146.52
3	141.68	270.27	193.58	242.40	244.35	158.99	155.50
4	147.11	284.59	199.67	250.77	247.40	168.12	161.83
5	148.85	283.82	198.43	250.27	251.74	166.82	162.22
6	154.55	292.81	205.53	264.85	263.40	173.92	169.78
7	163.36	308.78	214.05	273.35	270.43	175.74	177.68
8	166.75	316.73	221.04	287.77	280.03	182.41	183.64
9	179.96	341.23	237.08	296.97	296.50	192.84	197.37
10	181.46	337.95	235.71	297.07	291.40	191.87	196.86
11	179.58	338.50	229.96	293.23	287.30	192.54	198.00
12	197.64	379.12	251.00	305.68	318.04	202.41	212.10
13	206.96	384.01	258.71	306.74	315.51	207.93	221.09
14	213.04	384.91	259.36	312.19	327.36	209.43	226.32
15	220.86	392.25	266.21	311.15	327.27	215.26	234.43
16	233.34	412.16	286.42	321.87	330.20	223.07	246.66
17	174.33	337.88	229.61	288.32	283.91	182.33	188.35
18	212.68	401.18	274.42	320.24	338.54	210.10	229.54
19	222.95	440.69	267.98	320.17	317.74	215.00	234.38
20	207.19	388.13	258.04	310.57	314.77	205.73	221.79
21	251.78	477.70	298.62	339.80	383.72	235.40	265.98
22	300.99	537.22	354.98	350.97	418.77	270.15	309.89
23	260.58	535.22	299.09	336.92	357.20	244.67	270.57
24	218.97	445.63	276.36	310.05	301.93	214.55	232.26
25	239.55	437.41	308.36	323.67	371.88	231.40	252.83
26	273.67	452.56	308.10	343.04	376.71	253.22	285.79
CLASS AVG.	169.20	320.33	219.65	275.61	273.31	180.42	183.68

ADJUSTED PDL RATES (.54 CREDIT) MINUS ORIGINAL PROPOSED PDL RATES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	49.59	71.17	47.67	-14.10	57.70	57.65	48.05
2	46.39	51.49	33.76	-19.69	46.73	53.44	43.49
3	50.05	60.33	41.76	-17.38	59.30	57.05	47.48
4	50.45	65.70	41.88	-18.32	56.15	58.81	47.91
5	52.29	65.33	40.91	-17.03	61.68	59.54	49.51
6	53.13	62.78	40.32	-18.87	62.39	60.82	50.10
7	56.23	69.83	42.89	-18.54	63.98	61.15	53.18
8	57.03	67.43	42.98	-18.42	64.04	63.21	53.52
9	61.94	79.64	50.83	-18.33	72.31	67.02	58.42
10	64.42	80.05	51.92	-17.16	68.64	68.62	61.24
11	61.98	80.46	46.08	-17.26	68.45	67.10	57.74
12	71.07	106.30	57.26	-15.67	85.78	72.99	68.71
13	74.62	104.46	60.48	-17.21	79.79	75.00	70.97
14	74.64	94.14	53.66	-18.90	82.12	73.41	70.91
15	76.29	93.54	55.21	-22.64	78.42	74.00	71.11
16	82.58	99.27	65.44	-20.73	69.61	78.20	77.33
17	60.19	86.54	50.19	-22.12	65.09	63.29	57.89
18	70.41	102.94	63.73	-15.75	86.77	69.65	67.79
19	77.78	144.71	58.80	-11.16	72.17	74.84	75.64
20	69.62	97.39	52.35	-19.17	71.32	69.22	66.14
21	86.22	157.60	68.03	-11.14	112.01	79.83	84.06
22	106.52	195.54	95.61	-7.22	118.58	95.22	103.63
23	101.31	220.99	76.33	-8.24	93.19	94.63	100.32
24	80.62	158.81	73.29	-17.03	62.03	78.63	78.42
25	91.13	131.82	92.77	-12.85	119.40	88.36	87.99
26	101.75	118.87	59.39	-15.15	89.02	93.19	95.09
CLASS AVG.	59.19	77.06	46.31	-17.68	65.70	63.78	56.11

ADJUSTED PDL RATES (.54 CREDIT) WEIGHTED BY TOTAL MARKET CREDIT EXPOSURES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	132.06	258.84	184.64	215.82	222.84	151.23	137.45
2	135.09	253.02	179.97	227.54	223.41	152.69	140.76
3	141.68	270.27	193.58	242.40	244.35	158.99	148.92
4	147.11	284.59	199.67	250.77	247.40	168.12	155.08
5	148.85	283.82	198.43	250.27	251.74	166.82	155.63
6	154.55	292.81	205.53	264.85	263.40	173.92	162.32
7	163.36	308.78	214.05	273.35	270.43	175.74	170.59
8	166.75	316.73	221.04	287.77	280.03	182.41	175.04
9	179.96	341.23	237.08	296.97	296.50	192.84	188.91
10	181.46	337.95	235.71	297.07	291.40	191.87	189.55
11	179.58	338.50	229.96	293.23	287.30	192.54	188.76
12	197.64	379.12	251.00	305.68	318.04	202.41	206.01
13	206.96	384.01	258.71	306.74	315.51	207.93	214.63
14	213.04	384.91	259.36	312.19	327.36	209.43	220.17
15	220.86	392.25	266.21	311.15	327.27	215.26	227.89
16	233.34	412.16	286.42	321.87	330.20	223.07	240.32
17	174.33	337.88	229.61	288.32	283.91	182.33	182.23
18	212.68	401.18	274.42	320.24	338.54	210.10	222.74
19	222.95	440.69	267.98	320.17	317.74	215.00	229.84
20	207.19	388.13	258.04	310.57	314.77	205.73	215.30
21	251.78	477.70	298.62	339.80	383.72	235.40	261.41
22	300.99	537.22	354.98	350.97	418.77	270.15	307.75
23	260.58	535.22	299.09	336.92	357.20	244.67	268.28
24	218.97	445.63	276.36	310.05	301.93	214.55	227.83
25	239.55	437.41	308.36	323.67	371.88	231.40	247.82
26	273.67	452.56	308.10	343.04	376.71	253.22	280.49
CLASS AVG.	169.10	322.12	219.74	1.00	273.58	180.37	176.68

Exhibit 5C
Page 3

ADJUSTED PDL RATES (.54 CREDIT) WEIGHTED BY TOTAL FACILITY EXPOSURES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	132.06	258.84	184.64	215.82	222.84	151.23	151.93
2	135.09	253.02	179.97	227.54	223.41	152.69	157.63
3	141.68	270.27	193.58	242.40	244.35	158.99	167.02
4	147.11	284.59	199.67	250.77	247.40	168.12	173.74
5	148.85	283.82	198.43	250.27	251.74	166.82	173.19
6	154.55	292.81	205.53	264.85	263.40	173.92	181.40
7	163.36	308.78	214.05	273.35	270.43	175.74	187.90
8	166.75	316.73	221.04	287.77	280.03	182.41	194.86
9	179.96	341.23	237.08	296.97	296.50	192.84	207.86
10	181.46	337.95	235.71	297.07	291.40	191.87	206.29
11	179.58	338.50	229.96	293.23	287.30	192.54	207.97
12	197.64	379.12	251.00	305.68	318.04	202.41	219.90
13	206.96	384.01	258.71	306.74	315.51	207.93	227.56
14	213.04	384.91	259.36	312.19	327.36	209.43	231.30
15	220.86	392.25	266.21	311.15	327.27	215.26	238.11
16	233.34	412.16	286.42	321.87	330.20	223.07	250.15
17	174.33	337.88	229.61	288.32	283.91	182.33	195.21
18	212.68	401.18	274.42	320.24	338.54	210.10	235.25
19	222.95	440.69	267.98	320.17	317.74	215.00	237.73
20	207.19	388.13	258.04	310.57	314.77	205.73	227.20
21	251.78	477.70	298.62	339.80	383.72	235.40	268.29
22	300.99	537.22	354.98	350.97	418.77	270.15	310.97
23	260.58	535.22	299.09	336.92	357.20	244.67	273.99
24	218.97	445.63	276.36	310.05	301.93	214.55	236.90
25	239.55	437.41	308.36	323.67	371.88	231.40	255.88
26	273.67	452.56	308.10	343.04	376.71	253.22	288.38
CLASS AVG.	174.85	321.06	222.12	276.16	276.79	183.68	197.94

ADJUSTED PDL RATES (.54 CREDIT) WEIGHTED BY FACILITY CREDIT EXPOSURES

CLASS. TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	132.06	258.84	184.64	215.82	222.84	151.23	142.82
2	135.09	253.02	179.97	227.54	223.41	152.69	145.64
3	141.68	270.27	193.58	242.40	244.35	158.99	154.22
4	147.11	284.59	199.67	250.77	247.40	168.12	160.95
5	148.85	283.82	198.43	250.27	251.74	166.82	160.76
6	154.55	292.81	205.53	264.85	263.40	173.92	167.60
7	163.36	308.78	214.05	273.35	270.43	175.74	175.21
8	166.75	316.73	221.04	287.77	280.03	182.41	179.98
9	179.96	341.23	237.08	296.97	296.50	192.84	193.88
10	181.46	337.95	235.71	297.07	291.40	191.87	193.98
11	179.58	338.50	229.96	293.23	287.30	192.54	193.72
12	197.64	379.12	251.00	305.68	318.04	202.41	210.20
13	206.96	384.01	258.71	306.74	315.51	207.93	217.94
14	213.04	384.91	259.36	312.19	327.36	209.43	222.59
15	220.86	392.25	266.21	311.15	327.27	215.26	229.52
16	233.34	412.16	286.42	321.87	330.20	223.07	242.01
17	174.33	337.88	229.61	288.32	283.91	182.33	185.50
18	212.68	401.18	274.42	320.24	338.54	210.10	225.77
19	222.95	440.69	267.98	320.17	317.74	215.00	231.87
20	207.19	388.13	258.04	310.57	314.77	205.73	217.93
21	251.78	477.70	298.62	339.80	383.72	235.40	262.83
22	300.99	537.22	354.98	350.97	418.77	270.15	308.55
23	260.58	535.22	299.09	336.92	357.20	244.67	271.06
24	218.97	445.63	276.36	310.05	301.93	214.55	231.06
25	239.55	437.41	308.36	323.67	371.88	231.40	249.69
26	273.67	452.56	308.10	343.04	376.71	253.22	281.98
CLASS AVG.	174.75	322.91	222.26	1.00	277.09	183.65	186.54

1984 Massachusetts Private Passenger Automobile
Premium Varying by SDIP Points

The MARB proposes that the magnitude of the SDIP surcharge amounts be based on the assumption that the at-fault portion of the loss pure premium (loaded for commissions, profit, and taxes) vary according to surcharge level. We have calculated, from the MARB 1984 rate filing, that the appropriate charge per at-fault accident is $5252 (see Exhibit 6a).

The MARB has not included any Comprehensive coverage premiums or company expense components of the rates. We see no actuarial reason for varying these components according to SDIP point level.

The $5252 per at-fault accident is applied directly to MRB incremental claim frequencies in Exhibit 2a to estimate surcharges.

Since the proposed surcharges are determined by rounding and smoothing the indicated surcharges, and as a consequence are not very sensitive to changes in the "premium per at-fault accident," MARB is recommending that the final surcharges in Exhibit 2a be adopted, without the need for the Commissioner to recalculate "premium per at-fault accident" from the Decision rate components.

#1345

Exhibit 6a

1984 Massachusetts Private Passenger Automobile
Estimated Variable Portion of Premium Per MRB 'At Fault' Accidents

MARB Filing Rate Components

Coverage	1982 Exposure[1]	1984 Loss Pure Premium[2]	1984 Loading for Commissions, Profit, Tax[4]	Total Variable Premium	Percentage of Coverage "At-Fault"[3]	Total "At-Fault" Variable Premium
A-1	2727401	$ 59.86	.120	$68.02	1.0	$68.02
A-2 (PIP)	2616669	13.34	.120	15.16	0.5	7.58
B-basic	2727401	10.55	.120	11.99	1.0	11.99
B-increased (.897)	2025368	63.16	.120	71.77	1.0	71.77
PDL-basic	2727401	84.33	.170	101.60	1.0	101.60
PDL-increased (.040)	2417708	3.37	.170	4.06	1.0	4.06
Collision	1533120	136.32	.178	165.84	0.66	109.45
Ltd. Collision	296295	7.73	.178	9.40	0.0	0.00
Med. Pay.	1372321	10.86	.120	12.34	0.5	6.17
U	2727401	19.60	.120	22.27	0.0	0.00
Total Premium per exposure, weighted by exposures		375.77				310.41
Total Premium (Premium per exposure x 2727401)		1024875474				846612544
Premium per MRB Accident (Premium/161188)[5]		6358				5252

Notes

1 1984 MARB Filing, Form 110.
2 1984 MARB Filing, Form 100.
3 Collision based on ratio of "at fault" Type 11 payments to "at fault" plus "not at fault" Type 11 and 12 claims. From Data Base for 1984 rates, Reference 13A page 5. PIP and Med. Pay "at-fault" portions selected judgmentally.
4 See Exhibit 6b.
5 161188 is the number of claims reported to the Merit Rating Board in 1982 and displayed in Exhibit 8c.

#1346 Exhibit 6b

1984 Massachusetts Private Passenger Automobile
Calculation of 1984 Commission, Profit, Tax Allowances
MARB Filing Rate Components

Coverage	Exposure	Commission	Premium
A-1	2727401	$ 8.13	$72.05
A-2	2616669	3.34	18.18
B-basic	2727401	1.96	13.39
B-increased	2025368	9.05	76.64
PDL-basic	2727401	26.44	127.57
PDL-increased	2417708	1.06	5.10
Collision	1533120	29.39	196.01
Ltd. Collision	296295	7.86	20.90
Med. Pay	1372321	1.84	13.60
Comprehensive	1964459	14.02	111.81
U	2727401	0.71	20.38
Total, Wtd.	2727401	76.50	512.09
Commission %		.149	
Premium Tax %		.023	
Underwriting Profit Loading			
BI		-.052	
PDL		-.002	
Phys. Dam		.006	
Total variable expenses			
BI		.120	
PDL		.170	
Phys. Dam		.178	

Source: Form 100, Form 110; 8/12/83 MARB Filing

#1347 Exhibit 7

1984 Massachusetts Private Passenger Automobile
SDIP - Collection Rate

Under Merit Rating, a substantial proportion of surchargeable incidents were not paid, either because the driver involved was not listed on any policy or because the driver did not pay the surcharges that were billed. We fully expect the same kind of pattern to emerge under the SDIP, at least for 1984:

- Most operational aspects of the SDIP resemble Merit Rating. For example, agents are not yet able to make "on-line" inquiries to the Merit Rating Board when a new business application is submitted. Thus, many drivers will continue to slip through the cracks in the system.

- Many of the points that are chargeable for 1984 are on drivers who have a history of not paying Merit Rating surcharges; drivers who paid surcharges have been "forgiven" for 1984. Thus, the drivers who will be billed in 1984 are those who are least likely to pay.

- Current indications are that the promulgation of 1984 rates, and therefore the billing of premiums and surcharges, will be delayed. Such delays customarily create collection problems (see Exhibits 8 and 9).

Data from the Merit Rating Board indicates that, for drivers who had policies (and claims) in 1982,* about 90% of potential surcharge dollars were collected (Exhibit 7A). Since the SDIP proxy data provided to us by the Merit Rating Board similarly includes drivers who had policies in 1982, it might be reasonable to expect a 90% collection rate on these drivers as well. Certainly there is no foundation for optimistically assuming away the kind of slippage that currently exists in the Merit Rating program, by using a 100% collection rate.

The MARB, SRB, and AG have agreed, however, to use a 95% collection rate for 1984 SDIP surcharges.

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* Exhibit 7A includes only drivers who had policies in 1982 and who had At-Fault accidents in 1982. This data was the basis for the AG and SRB estimates of the rate level impact of c. 241.

INSURANCE COMPANY PROFILE
INQUIRY PERFORMANCE FOR OPERATORS INSURED DURING 1982
COMPANY BREAKDOWN

INSURED YEAR TOTALS

DESCRIPTION	OPERATORS NUMBER (1)	OPERATORS % (2)	MRB INSURED STATUS- % OPER LISTED (3)	% NOT LISTED (4)	% NO POLICY (5)	1982 SURCHARGE COLLECTION ANALYSIS- PROJECTED (6)	REPORTED (7)	ADJUSTED (8)	NET (9)	NET % OF 6 (10)	NET % OF 7 (11)
BY AGE OF INSURED OPERATOR											
UNDER 26 YEARS	63,203	40.8	74.1	17.9	7.9	3,284,882	4,206,561	1,214,727-	2,991,834	91.0	71.1
26 - 35 YEARS	33,553	21.6	82.7	9.7	7.5	1,259,522	1,481,799	381,662-	1,100,137	87.3	74.2
36 - 50 YEARS	24,915	16.1	87.7	6.0	6.2	599,957	671,991	143,288-	528,703	94.4	78.6
OVER 50 YEARS	31,766	20.5	92.1	3.8	4.0	543,241	525,208	79,628-	445,580	82.0	84.8
EMPLOYERS	1,337	.8	59.6	15.1	25.1	12,556	7,175	2,626-	4,549	36.2	63.4
TOTAL	154,774	100.0	81.7	11.3	6.9	5,660,158	6,892,734	1,821,931-	5,070,803	89.5	73.5
BY NBR SURCHARGES IN EXPER PERIOD											
NO SURCHARGE	107,753	69.6	80.6	12.0	7.3	666,956	1,009,201	134,795-	874,406	131.1	86.6
1 SURCHARGE	28,283	18.2	85.9	8.2	5.7	1,109,127	1,493,123	314,825-	1,178,298	106.2	78.9
2 SURCHARGES	10,343	6.6	84.1	10.1	5.7	1,125,531	1,401,375	344,255-	1,056,820	93.8	75.4
3 TO 5 SURCHARGES	7,266	4.6	80.3	12.8	6.8	1,942,138	2,182,827	691,818-	1,491,009	76.7	68.3
OVER 5 SURCHARGES	1,129	.7	70.7	21.1	8.0	816,406	806,508	336,238-	470,270	57.6	58.3
TOTAL	154,774	100.0	81.7	11.3	6.9	5,660,158	6,892,734	1,821,931-	5,070,803	89.5	73.5
BY OPERATOR/POLICYHOLDER RELATIONSHIP											
OPERATOR IS POLICYHOLDER	106,517	68.8	91.7	1.6	7.2	3,870,124	5,238,830	1,286,448-	3,952,382	102.1	75.4
OPERATOR HAS SAME LAST NAME	33,433	21.6	68.1	27.1	4.6	895,992	872,470	237,765-	635,204	70.8	72.7
OPERATOR HAS DIFFERENT NAME	8,999	5.8	22.6	69.0	7.4	449,249	327,163	136,813-	190,350	42.7	58.1
OPERATOR ID HAS CHANGED	4,483	2.9	69.5	19.2	11.2	436,637	446,596	158,279-	288,318	66.0	64.5
EMPLOYERS	1,337	.8	59.6	15.1	25.1	12,556	7,175	2,626-	4,549	36.2	63.4
TOTAL	154,774	100.0	81.7	11.3	6.9	5,660,158	6,892,734	1,821,931-	5,070,803	89.5	73.5

#1338 Exhibit 8

1984 Massachusetts Private Passenger Automobile
Merit Rating Board Claim Frequency Data Used in SDIP Calculations
(NO FORGIVENESS OF PAID INCIDENTS)

Exhibit	Description
Explanatory Memorandum:	Estimated Incremental Claim Frequencies by SDIP Status
8A	Summary of Merit Rating Board Claim Frequency Data; Estimated Incremental Claim Frequencies by SDIP status
8B	Merit Rating Board Exposure Data[1]
8C	Merit Rating Board Claim Count Data[1]
8D	Merit Rating Board Claim Frequency Data[1]
8E	Cleansed MRB Exposure Data[2]
8F	Cleansed MRB Claim Count Data[2]
8G	Cleansed MRB Claim Frequency Data[2]
8H	Cleansed MRB Claim Frequency Data, with total (all point levels) class-territory exposure data used to calculate statewide average claim frequency at each point level.[2]

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[1] Specifications and descriptions are provided in the Explanatory Memorandum and in Appendix C. Summaries of the claim frequency data are displayed in Exhibit 8A.

[2] Described in the Explanatory Memorandum and summarized in Exhibit 8A.

1984 Massachusetts Private Passenger Automobile
Estimated Incremental Claim Frequencies by SDIP Status
Explanatory Memorandum

For 1984, data precisely mirroring the newly introduced SDIP are not available. The Merit Rating Board (MRB) was able, however, to compile Merit Rating in a fashion that provides a reasonable proxy for the SDIP data (see Appendix C for a description of the data provided). The MARB, AG, and SRB agree that these Merit Rating Board compilations provide the best available data for evaluating the SDIP.

The MRB provided two sets of data compilations. Each tabulated 1982 policy years of exposure and claim counts (reported to the MRB) according to three variables of interest: territory, driver classification[1], and number of SDIP points[2]. The first of the two tabulations did not allow the forgiveness of SDIP points based on paid surcharges; this mirrors the SDIP after the expiration of the temporary "forgiveness" provision being used to smooth the transition from Merit Rating in 1984. The other set of data tabulations included the reduction of SDIP points due to the 1984 "forgiveness" process (see also Exhibit 9).

The MARB, SRB, and AG agreed that the data tabulations <u>without</u> "forgiveness" provided the appropriate basis for

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[1]Driver age groups were used as proxies for actual driver classifications; see Appendix C.

[2]SDIP points were determined in accordance with the SDIP highlights circulated by the Commissioner's office; see Appendix B.

estimating differences in claim frequencies between groups of drivers with different numbers of SDIP points. The tabulation of exposures with "forgiveness" is used to estimate the 1984 exposure distribution by SDIP point (see Exhibit 9).

The basic approach to pricing SDIP surcharges begins with a comparison of the claim frequency of a group of drivers with a specified number of SDIP points to the average claim frequency of all drivers. This difference in claim frequency, converted to a premium, indicates the appropriate surcharge or credit relative to the statewide average premium.

The claim frequencies indicated by the MRB data are summarized in column (1) of Exhibit 8A (the actual MRB data tabulations are included here as Exhibits 8B, 8C, 8D). As expected, the observed claim frequency rises steadily with the number of SDIP points.

However, the MRB data as produced cannot be used directly because the MRB data tabulations do not reflect the credit-ineligibility of inexperienced (0-3 years) principal operators. Therefore, the MARB adjusted the MRB data for these policies by shifting any data appearing in the "credit-eligible" category to the "no credit-no surcharge" category.[3] At the same

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[3]One possible alternative to this switching is simply to combine all "credit-eligible" and "no credit-no surcharge" experience. This alternative is inferior to the MARB approach because it produces indicated surcharges relative to the combined groups of "credit-eligible" and "no credit-no surcharge" drivers, while the actual surcharges are intended to apply as increments to the "no credit-no surcharge" rates. This alternative approach will produce surcharges that are too high.

time the MARB eliminated several data categories that the MARB, SRB, and AG judged to be unusable:

Territory "00" data

Territory "Error" data

Class "Operator Date of Birth Not Given"

Also, the "Operator 65 years and older" class is combined with the "All Operators 23-65 years" class, since the Class 10 and 15 drivers for which these two categories are proxies will be treated in identical manner by the SDIP.

Exhibits 8E, 8F, and 8G display the "cleansed" MRB data and Column (Z) of Exhibit 8A summarizes the resulting claim frequencies by SDIP level.

Again the general pattern is increasing claim frequency with increasing SDIP point. However, the claim frequency for the "no credit-no surcharge" group is higher than the claim frequency for the "1 point" group. Closer examination reveals that this apparent reversal results from the relatively large number of Class 20-25 exposures (which, being inexperienced operators, have higher-than-average claim frequencies) in the "no credit-no surcharge" group. Further, this same kind of distortion occurs in the higher SDIP point categories as well, albeit to a lesser extent and in the opposite direction. This phenomenon may be illustrated by the following hypothetical two-class example

		Class 1	Class 2	Average
0 point	exposures	100	10	
	claim freq.	5.0	10.0	5.45
1 point	exposures	50	8	
	claim freq.	6.0	11.0	6.69

In this example, the true claim frequency effect of moving from 0 points to 1 point is an increase of 1.0 (observe each class), while the apparent difference is 1.24 (based on the average claim frequencies). Similarly, simple use of the MRB data tends to overstate the claim frequency difference from one point level to the next, and thus to produce surcharges that are too high.

The MARB corrected for this problem by applying a fixed class-territory exposure distribution in calculating the average claim frequency (averaged over all classes and territories) at each SDIP level. The selected exposure distribution is the statewide total class-territory exposure distribution (all SDIP point levels combined), from Exhibit 9A Page 12. This approach is equivalent to calculating in each class and territory the incremental claim frequency effect of one SDIP point, and averaging these increments; the AG's computer model takes an approach that is qualitatively similar.

The resulting claim frequencies by SDIP level are shown in columns (3) and (4) of Exhibit 8A.[4] The comparison in column (5)

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[4]The credit claim frequency is calculated excluding Class 20-25, which have no "credit-eligible" data, and is compared to a statewide average claim frequency that similarly is calculated excluding Class 20-25.

of Exhibit 8A of each of these claim frequencies to the statewide average indicates the amount by which the claim frequencies are greater or less than the statewide average frequency; in Exhibit 2 these claim frequencies are converted to indicated premium differences, which in turn are used to develop indicated surcharges and credits.

1984 Massachusetts Private Passenger Automobile
Estimated Incremental Claim Frequencies by SDIP Status
All Classes and Territories Combined

(MRB Data with No Forgiveness)

	Claim Frequency				Claim Frequency Increment Above/Below Statewide Average[4]
			Cleansed MRB Data, Corrected for Different Class-Territory Exposure Distribution By SDIP Level[3]		
Points	MRB Data[1]	MRB Data, Cleansed[2]	All Classes	Excl. Class 20-25	
Credit	5.74	5.36	-	5.51	-.83
0	7.79	9.20	7.75		1.02
1	8.68	8.88	8.47		1.74
2	9.72	9.73	9.07		2.34
3	13.43	13.43	12.21		5.48
4	12.60	12.58	11.84		5.11
5	16.21	16.21	15.00		8.27
6	15.63	15.62	14.20		7.47
7	16.91	18.87	18.10		11.37
8	17.18	17.09	15.22		8.49
Over 8	24.75	24.76	24.86		18.13
All	6.70	6.73	6.73	6.34	

[1] Exhibit 8D Page 8

[2] MRB data with unusuable records eliminated and with inexperienced principal operator data shifted from "credit eligible" to "no credit-no surcharge". Source: Exhibit 8G.

[3] Exhibit 8H

[4] Based on cleansed MRB data, corrected for different class-territory exposure distribution by SDIP level. Increment for credit exposures based on data excluding Class 20-25.

AGE CLASS 1 ALL OPERATORS 23 YEARS AND OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN – NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	503	64	24	13	4	4	1	1	0	0	0	614
01	33,902	5,664	2,537	1,598	234	398	108	54	21	26	18	44,556
02	33,204	6,604	3,342	1,914	363	479	134	80	33	34	36	46,223
03	84,567	15,824	7,729	4,822	844	1,078	301	180	67	84	82	115,578
04	117,584	23,043	11,684	7,238	1,340	1,535	443	317	104	130	124	163,542
05	120,964	21,861	11,237	7,080	1,326	1,775	495	312	109	118	129	165,406
06	107,099	20,513	10,863	6,782	1,359	1,460	392	270	90	113	121	148,862
07	164,361	31,213	16,388	10,514	1,979	2,405	737	484	172	200	227	228,680
08	110,583	21,576	11,222	7,262	1,370	1,744	478	315	117	136	159	154,962
09	56,713	10,710	5,769	3,858	690	895	278	178	65	61	79	79,296
10	37,180	6,542	3,737	2,411	459	485	167	96	28	29	43	51,177
11	62,624	11,368	6,194	4,287	775	1,117	304	210	66	79	78	87,102
12	105,499	17,976	9,558	7,097	1,281	1,480	382	275	86	103	101	143,838
13	75,950	12,832	7,114	4,950	915	1,102	314	213	69	87	89	103,635
14	11,147	2,087	1,134	737	146	214	49	43	16	17	23	15,613
15	12,788	2,277	1,409	901	208	182	61	51	21	19	23	17,940
16	11,526	2,103	1,128	812	152	212	68	43	9	20	18	16,091
17	5,191	960	544	359	78	80	25	18	12	3	9	7,279
18	4,728	1,007	583	354	80	85	33	20	6	8	15	6,919
19	5,586	1,019	609	362	83	87	26	11	5	6	5	7,799
20	5,067	1,054	559	390	97	86	26	21	8	4	8	7,320
21	17,739	3,645	1,981	1,329	287	276	81	71	33	13	21	25,476
22	3,910	730	392	285	67	61	14	12	4	5	3	5,483
23	10,186	1,502	842	467	110	95	21	15	4	7	8	13,257
24	8,587	1,330	789	491	103	101	39	20	7	8	6	11,479
25	3,460	492	272	196	41	54	13	8	3	4	3	4,546
26	5,469	914	486	321	64	76	23	21	12	4	8	7,398
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	1,216,117	224,910	117,928	76,830	14,455	17,564	5,011	3,339	1,167	1,316	1,436	1,680,071

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN.

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

Exhibit 8B
Page 1

AGE CLASS 2 ALL OPERATORS 20-22 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	168	31	15	7	0	2	0	1	1	0	1	228
01	2,274	648	324	208	50	63	34	21	11	8	11	3,652
02	2,150	791	382	292	94	103	41	27	25	17	34	3,956
03	5,921	2,083	1,180	728	250	216	118	66	41	39	67	10,709
04	8,804	2,983	1,617	1,017	369	378	168	110	52	60	95	15,653
05	8,668	2,849	1,579	1,062	382	373	179	103	59	59	86	15,399
06	7,706	2,719	1,596	1,076	371	342	176	121	62	55	87	14,311
07	11,618	4,024	2,318	1,547	503	473	221	177	85	83	129	21,178
08	8,419	3,077	1,860	1,190	412	394	211	129	68	52	104	15,916
09	4,571	1,601	903	607	201	192	105	62	37	16	55	8,350
10	2,776	878	550	384	123	123	53	34	16	13	37	4,987
11	5,190	1,735	1,012	687	236	205	109	66	32	43	51	9,366
12	8,056	2,074	1,232	933	285	293	113	91	38	31	56	13,200
13	5,512	1,473	924	664	196	199	98	63	26	21	35	9,211
14	798	250	157	104	34	33	19	11	9	7	6	1,428
15	966	272	182	143	39	38	22	13	5	7	16	1,703
16	835	269	180	126	37	26	14	8	8	7	14	1,524
17	375	103	73	44	21	10	6	5	2	2	2	643
18	394	115	59	55	14	13	11	5	3	2	4	675
19	334	68	38	30	9	5	5	2	1	1	3	496
20	391	119	80	49	21	12	6	4	2	4	5	693
21	1,204	227	161	110	35	28	10	7	5	1	6	1,794
22	229	34	25	18	6	3	2	1	0	0	1	319
23	722	77	94	31	10	6	2	2	1	0	1	906
24	739	113	90	50	13	16	5	4	1	0	4	1,055
25	261	47	46	24	13	8	3	3	1	1	0	407
26	349	96	68	37	11	12	6	7	1	4	5	596
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	89,450	28,738	16,705	11,223	3,735	3,568	1,737	1,143	590	533	915	158,353

FOOTNOTES: 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN.

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 3 ONE OR MORE OPERATORS 20-22 YEARS, ANOTHER 23 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	29	3	1	4	0	0	0	1	0	0	0	38
01	826	284	144	85	21	17	5	2	0	2	2	1,388
02	859	340	189	135	35	32	12	4	0	4	4	1,614
03	2,472	946	551	368	74	77	23	17	5	7	15	4,555
04	3,539	1,453	806	529	127	112	45	28	10	8	17	6,674
05	3,015	1,140	687	439	107	101	42	21	11	14	24	5,601
06	2,929	1,167	695	527	108	86	36	22	13	8	19	5,610
07	4,284	1,777	987	743	155	177	58	33	15	12	20	8,261
08	2,877	1,208	762	498	109	111	36	27	9	9	21	5,667
09	1,456	564	339	237	53	49	20	13	3	4	9	2,747
10	1,066	404	244	194	21	41	12	8	1	4	4	1,999
11	1,767	692	376	292	62	89	22	24	9	9	9	3,351
12	2,916	971	618	504	103	90	39	25	3	7	15	5,291
13	1,794	642	378	276	50	65	23	13	5	6	11	3,263
14	332	119	97	53	15	16	4	2	1	1	1	641
15	272	95	71	59	13	8	2	2	2	1	1	526
16	311	106	73	58	10	14	2	3	1	0	3	581
17	162	57	34	31	7	4	2	2	1	0	0	300
18	163	66	33	27	5	6	1	2	0	0	2	305
19	74	22	20	9	0	2	1	1	2	0	0	131
20	135	50	24	35	5	4	2	1	1	1	0	258
21	320	124	82	55	11	10	2	3	1	1	1	610
22	42	12	10	5	3	2	0	0	0	0	0	74
23	131	44	28	20	7	3	2	0	0	0	0	235
24	174	57	38	22	6	4	0	1	1	0	0	301
25	92	17	19	6	3	1	1	0	0	1	0	140
26	136	50	33	31	5	8	2	1	1	1	2	270
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	32,173	12,410	7,387	5,242	1,115	1,129	394	296	95	100	180	60,431

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

POLICY YEARS EXPOSURE

AGE CLASS 4 ALL OPERATORS 16-19 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	51	9	9	5	1	0	1	0	0	0	0	76
01	1,805	215	186	145	35	31	15	13	1	5	5	2,456
02	1,907	238	282	195	63	52	26	17	9	4	13	2,806
03	5,245	620	649	506	155	128	64	28	21	10	30	7,456
04	6,719	784	905	693	219	174	80	52	24	15	32	9,697
05	7,663	803	896	771	222	175	73	53	19	18	29	10,722
06	6,620	781	863	681	230	174	82	54	30	20	32	9,567
07	9,301	1,011	1,139	950	283	243	105	71	33	22	42	13,200
08	7,332	819	938	766	226	177	84	60	41	12	34	10,489
09	3,730	403	441	357	120	99	48	22	14	10	17	5,261
10	1,854	205	231	197	55	42	21	12	9	8	5	2,639
11	3,906	376	419	383	103	78	46	27	12	14	14	5,378
12	4,852	378	493	480	115	98	45	29	9	9	12	6,520
13	3,514	285	361	377	96	77	30	24	13	7	8	4,792
14	471	50	61	50	15	7	8	4	2	2	3	673
15	547	51	86	69	15	18	7	4	1	2	5	805
16	487	44	66	58	17	13	6	5	3	2	2	703
17	175	21	25	18	4	3	2	1	0	2	4	255
18	206	15	29	12	7	3	2	1	1	0	1	277
19	128	17	10	9	5	0	0	1	0	0	1	171
20	198	17	28	22	5	5	2	1	1	1	0	281
21	559	33	46	35	7	6	3	1	3	0	1	695
22	85	4	4	3	2	0	0	0	0	0	0	98
23	183	13	15	9	2	3	0	0	0	0	0	225
24	202	15	25	16	12	1	3	1	1	0	2	278
25	133	10	7	9	2	3	1	1	0	0	0	166
26	224	30	20	23	6	5	1	1	0	1	1	312
ERROR	0	0	0	0	0	0	0	0	0	0	0	
ALL	68,097	7,247	8,284	6,839	2,022	1,615	755	485	243	164	293	95,54

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASS...

POLICY YEARS EXPOSURE

AGE CLASS 5 ONE OR MORE OPERATORS 16-19 YEARS, ANOTHER 20 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	10	1	1	2	1	0	0	1	0	0	0	16
01	1,490	483	247	189	30	35	8	9	1	5	3	2,500
02	1,667	638	373	282	72	54	24	13	5	4	2	3,134
03	5,254	1,755	1,009	873	150	129	38	22	8	12	17	9,267
04	6,984	2,445	1,544	1,225	244	196	52	34	13	8	24	12,769
05	5,861	1,860	1,161	959	194	148	37	24	13	13	8	10,278
06	5,764	1,848	1,262	994	193	154	53	30	14	6	14	10,332
07	7,828	2,505	1,641	1,410	233	209	74	56	15	14	21	14,006
08	5,650	1,882	1,254	1,066	203	189	45	35	16	15	12	10,367
09	2,602	797	527	465	75	89	23	17	4	6	8	4,613
10	1,707	520	384	336	65	51	15	5	3	2	4	3,092
11	2,574	846	507	480	88	85	30	13	3	5	7	4,638
12	4,318	1,153	762	784	117	103	28	14	5	3	7	7,294
13	2,551	730	529	480	77	61	21	12	4	8	4	4,477
14	456	137	92	78	13	15	7	5	1	0	1	805
15	380	110	94	72	12	11	5	4	0	0	1	689
16	433	156	109	112	14	16	6	5	2	0	1	854
17	252	78	49	45	7	12	8	0	2	0	1	454
18	182	52	39	31	7	4	3	1	0	0	0	319
19	89	27	22	27	2	0	1	0	0	0	0	168
20	172	35	41	36	9	8	3	1	1	0	1	307
21	359	90	57	55	11	11	0	2	0	1	0	586
22	30	9	5	5	2	0	0	0	0	0	0	51
23	105	32	24	11	1	2	1	0	0	1	1	178
24	148	57	37	24	7	2	2	2	0	0	2	281
25	98	17	15	13	2	2	0	1	0	0	0	148
26	181	64	39	37	5	4	2	3	0	1	1	337
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	57,145	18,327	11,824	10,091	1,834	1,590	486	309	104	104	140	101,960

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 6 ONE OR MORE OPERATORS 69 YEARS OR OLDER, NONE UNDER 23

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	80	6	1	6	0	0	0	0	0	0	0	9
01	10,493	670	438	402	40	43	10	4	0	1	0	12,101
02	7,929	502	347	353	39	28	4	3	2	1	1	9,209
03	18,153	1,341	813	855	67	67	6	9	3	3	3	21,320
04	22,415	1,702	1,166	1,063	90	121	18	13	5	5	2	26,600
05	25,381	1,824	1,407	1,213	104	120	15	18	2	6	3	30,093
06	20,967	1,641	1,100	1,088	106	113	25	14	1	0	1	25,056
07	33,476	2,599	1,898	1,898	162	207	31	26	5	10	4	40,316
08	20,550	1,542	1,080	1,038	83	103	12	15	3	5	9	24,440
09	10,176	790	575	566	53	57	11	7	2	5	3	12,245
10	8,358	627	478	440	43	61	7	3	2	1	0	10,020
11	12,808	1,002	760	722	75	100	11	8	3	3	2	15,494
12	24,061	2,042	1,399	1,504	160	154	20	20	4	3	3	29,370
13	14,089	978	762	783	70	79	10	16	5	1	3	16,796
14	2,369	192	133	126	13	17	2	3	0	0	2	2,857
15	1,926	151	116	97	9	11	0	0	0	0	0	2,310
16	2,348	223	149	138	5	15	2	1	2	0	0	2,883
17	1,620	125	86	73	11	5	2	1	0	0	0	1,923
18	1,067	98	48	92	4	2	2	0	1	1	1	1,276
19	787	67	46	40	8	6	1	2	1	0	1	959
20	1,157	93	69	67	6	6	0	0	0	0	0	1,398
21	2,196	197	126	105	6	15	1	3	0	2	0	2,651
22	410	38	29	24	3	5	0	1	1	0	0	511
23	904	77	58	45	5	2	1	1	2	0	0	1,095
24	1,127	99	83	70	10	7	1	1	0	0	0	1,398
25	924	28	23	29	2	1	0	2	0	0	0	609
26	893	63	42	54	8	4	0	0	0	0	0	1,064
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	246,264	18,717	13,232	12,851	1,182	1,349	192	171	47	38	29	294,081

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

POLICY YEARS EXPOSED

AGE CLASS 7 OPERATOR DATE OF BIRTH NOT GIVEN

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	24	0	0	0	0	0	0	0	0	0	0	24
01	375	11	1	1	0	0	0	0	0	0	0	388
02	440	6	1	2	0	1	0	0	0	0	0	450
03	1,237	31	5	5	0	1	0	0	0	0	0	1,279
04	1,738	31	3	4	1	0	0	0	0	0	0	1,777
05	1,444	37	2	5	0	1	0	1	0	0	0	1,490
06	1,303	31	3	2	2	1	0	0	0	0	0	1,342
07	1,969	42	7	7	1	0	0	0	0	0	0	2,026
08	1,305	27	5	4	0	1	0	0	0	0	0	1,342
09	563	4	0	1	0	0	0	0	0	0	0	568
10	436	8	1	2	0	0	0	0	0	0	0	447
11	423	11	1	2	0	0	0	0	0	0	0	437
12	999	19	5	4	0	0	0	0	0	0	0	1,027
13	542	9	0	1	1	0	0	0	0	0	0	553
14	99	1	0	0	0	0	0	0	0	0	0	100
15	53	0	0	0	0	0	0	0	0	0	0	53
16	83	0	0	0	0	0	0	0	0	0	0	83
17	28	0	0	0	0	0	0	0	0	0	0	28
18	19	0	0	0	0	0	0	0	0	0	0	19
19	37	0	0	0	0	0	0	0	0	0	0	37
20	15	0	0	0	0	0	0	0	0	0	0	15
21	48	2	0	1	0	0	0	0	0	0	0	51
22	13	1	0	0	0	0	0	0	0	0	0	14
23	246	3	0	0	0	0	0	0	0	0	0	249
24	40	0	0	0	0	0	0	0	0	0	0	40
25	13	1	0	0	0	0	0	0	0	0	0	14
26	24	0	0	0	0	0	0	0	0	0	0	24
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	13,516	275	43	41	5	5	0	1	0	0	0	13,877

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

POLICY YEARS EXPOSURE

AGE CLASS ALL

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	865	114	51	37	6	6	2	4	1	0	1	1,087
01	51,165	7,975	3,877	2,628	410	585	178	103	34	47	39	67,041
02	48,156	9,119	4,916	3,173	666	749	241	144	74	64	90	67,392
03	122,849	22,600	11,936	8,157	1,540	1,696	550	322	145	155	214	170,164
04	167,783	32,441	17,725	11,769	2,390	2,516	806	554	208	226	294	236,712
05	172,996	30,374	16,969	11,529	2,335	2,693	841	532	213	228	279	238,989
06	152,388	28,700	16,182	11,150	2,369	2,330	764	511	210	202	274	215,080
07	232,837	43,171	24,378	17,069	3,316	3,714	1,226	847	325	341	443	327,667
08	156,716	30,131	17,121	11,824	2,403	2,719	866	581	254	229	339	223,183
09	79,811	14,869	8,554	6,091	1,192	1,381	485	299	125	102	171	113,080
10	53,377	9,184	5,625	3,964	766	803	275	158	59	57	93	74,361
11	89,292	16,030	9,269	6,853	1,339	1,674	522	348	125	153	161	125,766
12	150,701	24,613	14,067	11,306	2,061	2,218	627	454	143	196	194	206,540
13	103,952	16,949	10,068	7,531	1,405	1,583	496	341	122	130	150	142,727
14	15,672	2,836	1,674	1,148	236	302	89	68	29	27	36	22,117
15	16,932	2,956	1,958	1,341	296	268	97	74	29	29	46	24,026
16	16,023	2,901	1,705	1,304	235	296	98	65	25	29	38	22,719
17	7,803	1,344	811	570	128	114	45	27	17	7	16	10,882
18	6,759	1,353	791	531	117	113	52	29	11	11	23	9,790
19	7,035	1,220	745	477	107	100	34	17	9	7	10	9,761
20	7,135	1,368	801	599	143	121	39	28	13	10	14	10,271
21	22,425	4,318	2,453	1,690	357	346	97	87	42	19	29	31,862
22	4,719	828	465	340	83	71	16	14	5	5	4	6,550
23	12,477	1,748	1,021	583	135	111	27	18	7	8	10	16,145
24	11,037	1,671	1,060	673	151	131	50	29	10	6	14	14,832
25	4,581	612	382	277	63	69	18	15	4	6	3	6,030
26	7,276	1,217	688	503	99	109	34	33	14	11	17	10,001
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	1,722,762	310,642	175,292	123,117	24,348	26,818	8,575	5,702	2,253	2,264	3,002	2,404,775

2,032,000 exposures

15.5%

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS

AGE CLASS 1 ALL OPERATORS 23 YEARS AND OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS										
		0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	11	3	1	0	2	2	0	0	0	0	0	19
01	1,327	315	136	94	22	30	17	8	3	2	4	1,958
02	1,300	366	194	121	32	44	17	7	8	2	3	2,094
03	3,357	869	484	296	78	101	32	17	10	10	22	5,276
04	4,986	1,413	749	539	136	157	46	43	24	15	17	8,125
05	5,017	1,268	769	500	115	174	61	30	21	12	31	7,998
06	4,884	1,272	708	502	121	127	51	42	14	16	39	7,776
07	7,737	2,113	1,201	847	194	237	83	56	25	26	46	12,565
08	5,204	1,393	854	598	123	178	65	38	15	15	20	8,503
09	2,808	716	427	339	85	89	32	20	12	15	19	4,562
10	1,823	424	282	194	65	58	35	12	3	4	13	2,913
11	3,500	900	530	388	104	143	40	33	13	19	19	5,689
12	5,874	1,466	846	698	181	181	67	42	20	14	40	9,429
13	4,398	994	665	407	131	131	51	31	10	14	25	6,857
14	593	154	78	71	18	25	9	5	2	2	5	962
15	757	192	124	78	36	22	4	13	4	3	5	1,238
16	638	171	112	66	24	31	16	7	2	2	4	1,073
17	260	69	34	33	8	7	4	1	0	0	4	420
18	246	64	50	30	14	12	5	4	0	0	8	433
19	328	75	60	36	8	7	3	1	0	3	1	522
20	305	79	54	32	15	5	2	4	1	1	4	502
21	1,321	327	204	157	61	44	20	16	9	2	10	2,171
22	318	70	49	38	10	7	0	1	0	0	2	495
23	494	118	80	39	11	16	5	2	0	4	1	770
24	548	90	74	55	16	14	4	3	1	0	2	807
25	217	34	21	11	5	5	1	2	0	1	2	299
26	337	74	42	47	10	9	9	4	3	1	3	539
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	58,568	15,029	8,828	6,216	1,625	1,856	679	442	206	183	349	93,995

FOOTNOTES
1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES
2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN
3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU
4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN
5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS

AGE CLASS 2 ALL OPERATORS 20-22 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	3	1	1	0	0	1	0	0	0	0	0	6
01	120	43	28	20	6	11	8	6	1	0	2	279
02	157	70	43	33	10	6	9	5	4	2	8	347
03	441	172	126	84	38	30	15	9	4	11	7	937
04	624	298	164	130	46	58	24	18	5	10	27	1,404
05	644	268	172	112	57	56	24	17	8	13	22	1,393
06	577	273	178	127	61	56	25	24	12	8	16	1,357
07	912	415	267	162	75	72	41	30	11	16	27	2,028
08	790	348	226	157	66	54	39	21	18	9	21	1,749
09	376	158	97	74	34	35	21	8	14	2	17	836
10	259	115	81	55	27	22	10	5	2	0	13	589
11	462	190	140	88	45	41	28	12	6	6	25	1,043
12	717	227	172	135	50	48	30	21	5	6	18	1,429
13	571	179	105	104	33	37	19	9	6	5	8	1,076
14	90	33	24	17	4	9	5	2	0	2	2	188
15	109	34	23	34	5	10	6	1	4	7	8	241
16	89	34	23	30	4	4	8	0	3	2	2	199
17	38	10	13	8	2	3	1	1	1	0	0	77
18	43	14	5	9	2	1	1	3	0	0	1	79
19	25	5	7	5	3	1	1	0	0	0	0	47
20	35	13	17	4	2	6	3	2	0	1	1	84
21	161	33	30	17	7	7	0	1	1	0	3	260
22	25	3	1	3	0	0	0	1	1	0	2	36
23	76	8	6	5	3	1	0	0	0	0	0	99
24	69	11	15	9	4	1	0	2	2	1	0	114
25	27	6	5	3	7	2	2	0	0	0	0	52
26	35	14	7	9	2	1	0	1	1	1	4	75
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	7,505	2,975	1,976	1,434	593	573	320	199	109	102	234	16,020

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIF ATION DATA

AT-FAULT ACCIDENT CLAIMS

AGE CLASS 3 ONE OR MORE OPERATORS 20-22 YEARS, ANOTHER 23 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	1	0	0	0	0	0	0	0	0	0	0	1
01	56	24	11	10	0	1	0	0	0	0	2	104
02	67	26	15	13	7	2	1	2	0	0	0	133
03	194	94	55	35	10	5	6	2	0	1	2	404
04	263	128	68	53	22	12	5	4	3	3	1	562
05	218	103	67	37	19	13	4	5	4	1	4	475
06	210	100	73	49	19	16	9	2	3	1	2	486
07	349	165	109	77	20	27	9	7	0	9	3	775
08	209	120	95	77	19	9	6	6	3	0	2	546
09	127	50	41	24	5	4	1	1	1	0	1	255
10	108	38	27	30	4	5	1	2	0	0	1	216
11	153	62	44	32	6	10	5	5	4	0	3	324
12	262	106	69	54	20	16	4	4	0	0	3	538
13	171	58	49	35	8	11	6	1	0	2	3	344
14	41	13	6	3	3	3	2	0	0	0	0	71
15	29	12	7	7	0	3	1	0	0	0	0	59
16	29	9	9	8	2	2	0	0	0	0	0	59
17	17	9	1	1	1	0	0	0	1	0	0	30
18	13	5	5	2	0	0	0	0	0	0	0	25
19	7	2	1	3	0	0	0	0	0	0	0	13
20	14	8	3	3	1	0	0	0	0	0	0	29
21	26	14	7	4	3	2	0	2	0	0	0	58
22	5	0	2	0	0	0	0	0	0	0	0	7
23	11	9	1	4	0	0	1	0	0	0	0	26
24	17	4	7	2	2	1	0	0	0	0	0	33
25	14	2	1	0	1	0	1	0	0	0	0	19
26	14	2	4	5	0	0	0	0	0	1	0	26
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	2,625	1,162	773	588	172	142	62	53	16	18	27	5,618

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

MERIT RATING BOARD
SAFE DRIVER CLASSI ATION DATA

AT-FAULT ACCIDENT CLAIMS

AGE CLASS 4 ALL OPERATORS 16-19 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	4	1	2	0	0	0	0	0	0	0	0	7
01	195	26	22	16	10	2	5	3	0	0	3	282
02	235	32	36	44	9	10	3	5	3	0	0	377
03	681	74	78	73	34	21	9	10	4	2	9	995
04	912	108	129	100	34	20	16	13	4	3	4	1,343
05	1,099	99	142	139	40	35	18	12	8	7	10	1,609
06	1,050	96	119	115	50	37	28	10	8	7	11	1,529
07	1,433	134	164	175	64	65	21	15	7	8	20	2,106
08	1,189	104	143	139	41	32	24	14	10	2	5	1,703
09	641	73	67	59	22	15	10	1	4	0	5	897
10	352	25	39	29	11	8	7	3	2	3	0	479
11	682	45	71	76	22	25	11	14	4	6	1	957
12	871	55	79	78	22	30	9	12	5	3	5	1,169
13	676	40	57	81	21	18	6	6	0	2	9	916
14	82	7	12	12	3	2	2	0	0	1	3	124
15	114	7	12	13	4	6	1	3	0	1	5	166
16	88	7	13	13	7	2	3	1	0	2	0	136
17	24	2	2	5	0	0	1	0	0	4	2	40
18	33	1	6	6	0	1	3	1	1	0	0	52
19	21	3	0	5	1	0	0	0	0	0	0	30
20	40	3	2	2	1	0	0	0	0	0	0	48
21	87	4	8	8	4	1	0	0	0	0	1	113
22	12	1	0	1	2	0	0	0	0	0	0	16
23	23	2	1	0	0	2	0	0	0	0	0	28
24	33	3	4	5	1	1	3	0	0	0	1	51
25	21	0	1	2	1	1	0	0	0	0	0	26
26	34	2	5	7	2	3	0	2	0	0	0	55
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	10,632	954	1,214	1,203	406	337	180	129	80	51	94	15,254

FOOTNOTES: 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

AT-FAULT ACCII CLAIMS

AGE CLASS 5 ONE OR MORE OPERATORS 16-19 YEARS, ANOTHER 20 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	2	0	0	0	0	0	0	0	0	0	0	2
01	152	48	31	22	6	6	0	0	0	1	0	286
02	188	85	48	47	6	8	1	3	0	3	1	390
03	614	227	121	112	35	16	9	4	2	0	0	1,140
04	822	314	182	194	45	33	10	8	6	0	3	1,617
05	653	270	151	142	33	29	9	5	2	2	2	1,298
06	649	256	194	124	33	33	11	5	0	2	6	1,313
07	1,019	401	243	240	45	45	16	10	1	6	3	2,029
08	744	298	205	170	44	28	5	7	5	5	4	1,515
09	332	108	96	72	9	20	12	4	0	4	0	657
10	233	73	55	57	9	7	2	1	2	0	3	442
11	305	133	88	80	21	23	5	6	1	2	1	865
12	605	210	102	132	20	21	7	1	3	0	3	1,104
13	392	125	95	53	14	12	3	3	3	3	1	704
14	80	19	13	11	2	3	1	2	1	0	0	132
15	43	21	14	22	4	0	1	0	0	0	0	105
16	58	27	20	15	7	0	2	0	0	0	0	129
17	30	14	7	7	0	0	0	0	2	0	0	60
18	18	5	5	9	1	0	0	0	0	0	0	38
19	10	2	6	11	0	0	0	0	0	0	0	29
20	26	4	3	4	2	0	3	0	0	0	1	43
21	33	13	9	4	0	3	0	1	0	0	0	63
22	4	2	1	0	0	0	0	0	0	0	0	7
23	11	5	2	3	0	0	0	0	0	0	0	22
24	13	8	5	4	1	2	0	0	0	0	0	33
25	11	1	3	4	0	2	0	0	0	0	0	20
26	21	10	4	14	0	0	0	0	0	0	0	49
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	7,068	2,679	1,703	1,555	337	291	97	80	28	28	34	15,872

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCID. CLAIMS

AGE CLASS 6 ONE OR MORE OPERATORS 65 YEARS OR OLDER, NONE UNDER 23

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	1	0	0	0	0	0	0	0	0	0	0	1
01	429	41	25	27	6	3	0	0	0	0	0	531
02	330	33	20	23	2	4	0	1	0	0	1	414
03	820	88	51	68	6	10	0	0	0	0	2	1,045
04	995	121	66	90	9	16	5	1	0	1	0	1,304
05	1,132	112	98	98	12	15	2	4	0	4	1	1,478
06	992	119	84	78	9	14	9	2	1	1	0	1,309
07	1,830	196	184	156	22	23	11	4	3	0	1	2,430
08	991	116	74	64	6	18	0	1	1	0	3	1,274
09	539	61	54	40	13	5	2	0	0	0	1	715
10	378	54	40	31	4	6	5	0	0	0	0	518
11	690	83	82	62	11	14	4	0	2	0	2	950
12	1,394	160	137	136	14	26	6	4	0	0	0	1,877
13	737	78	66	57	11	5	2	3	0	0	0	959
14	128	19	15	5	3	4	0	0	0	0	0	174
15	90	15	10	10	0	5	0	0	0	0	0	130
16	132	23	13	5	2	1	1	0	1	0	0	178
17	80	8	9	3	1	0	2	0	0	0	0	103
18	61	6	8	6	0	0	2	0	1	0	0	84
19	45	9	3	3	1	1	0	0	0	0	0	62
20	44	5	3	6	0	1	0	0	0	0	0	59
21	120	15	14	9	2	4	0	0	0	0	0	164
22	42	3	4	2	1	1	0	0	0	0	0	53
23	51	10	1	4	0	0	0	0	1	0	0	67
24	53	9	10	6	1	0	1	0	0	0	0	80
25	17	0	0	2	1	0	0	1	0	0	0	21
26	43	7	4	4	0	1	0	0	0	0	0	59
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	12,164	1,391	1,079	995	137	177	52	21	10	6	11	16,039

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN.

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS

AGE CLASS 7 OPERATOR DATE OF BIRTH NOT GIVEN

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	I	0	0	0	0	0	0	0	0	0	0	1
01	8	1	0	0	0	0	0	0	0	0	0	9
02	8	0	0	0	0	2	0	0	0	0	0	10
03	32	3	0	0	0	0	0	0	0	0	0	35
04	42	1	0	1	0	0	0	0	0	0	0	44
05	34	3	0	0	0	0	0	1	0	0	0	38
06	39	2	0	3	0	0	0	0	0	1	0	45
07	68	1	0	0	0	0	0	0	0	0	0	69
08	34	1	0	0	0	0	0	0	0	0	0	35
09	11	0	0	0	0	0	0	0	0	0	0	11
10	14	0	0	0	0	0	0	0	0	0	0	14
11	17	0	0	0	0	0	0	0	0	0	0	17
12	32	0	0	0	0	0	0	0	0	0	0	32
13	13	0	0	0	0	0	0	0	0	0	0	13
14	5	0	1	0	0	0	0	0	0	0	0	6
15	1	0	0	0	0	0	0	0	0	0	0	1
16	1	0	0	0	0	0	0	0	0	0	0	1
17	1	0	0	0	0	0	0	0	0	0	0	1
18	1	0	0	0	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	1	1	0	0	0	0	0	0	0	0	0	2
22	0	1	0	0	0	0	0	0	0	0	0	1
23	3	0	0	0	0	0	0	0	0	0	0	3
24	1	0	0	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	367	14	1	4	0	2	0	1	0	1	0	390

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS

AGE CLASS ALL

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN – NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	23	5	4	0	2	3	0	0	0	0	0	37
01	2,317	498	253	189	50	53	30	17	4	3	11	3,429
02	2,285	612	356	281	66	76	31	23	15	7	13	3,765
03	6,139	1,527	915	668	201	183	71	42	20	24	42	9,832
04	8,645	2,383	1,358	1,107	292	296	106	87	42	32	52	14,399
05	8,797	2,123	1,399	1,028	276	322	118	74	43	39	70	14,289
06	8,401	2,118	1,356	998	293	283	133	85	38	36	74	13,815
07	13,348	3,425	2,168	1,657	420	469	181	122	47	65	100	22,002
08	9,161	2,380	1,597	1,205	299	319	139	87	52	31	55	15,325
09	4,834	1,166	782	608	168	168	78	34	31	21	43	7,933
10	3,167	729	524	396	120	106	60	23	9	7	30	5,171
11	5,809	1,413	955	726	209	256	93	70	30	33	51	9,645
12	9,755	2,224	1,405	1,233	307	322	123	84	33	23	69	15,578
13	6,958	1,474	1,037	737	218	214	87	53	19	26	46	10,869
14	1,019	245	149	119	33	46	19	9	3	5	10	1,657
15	1,143	281	190	164	49	46	13	17	8	11	18	1,940
16	1,035	271	190	137	46	40	30	8	6	6	6	1,775
17	450	112	66	57	12	10	8	2	4	4	6	731
18	415	95	79	62	17	14	11	8	2	0	9	712
19	436	96	77	63	13	9	4	1	0	3	1	703
20	464	112	82	51	21	12	8	6	1	2	6	765
21	1,749	407	272	199	77	61	20	20	10	2	14	2,831
22	406	80	57	44	13	8	0	2	1	0	4	615
23	669	152	92	55	14	19	6	2	1	4	1	1,015
24	734	125	115	81	25	19	8	5	3	1	3	1,119
25	307	43	30	22	15	10	4	3	0	1	2	437
26	484	109	66	86	14	14	9	7	4	3	7	803
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	98,644	24,205	15,574	11,973	3,270	3,378	1,390	841	443	369	745	161,188

FOOTNOTES – 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 1 ALL OPERATORS 23 YEARS AND OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	2.19	4.69	4.17	.00	50.00	50.00	.00	.00	.00	.00	.00	3.09
01	3.91	5.56	5.36	5.88	9.40	7.58	16.04	14.81	14.29	7.69	22.22	4.39
02	3.92	5.54	5.80	6.32	8.82	9.19	12.69	8.75	24.24	5.88	8.33	4.53
03	3.97	5.49	6.26	6.14	9.24	9.37	10.63	9.44	14.93	11.90	26.83	4.56
04	4.24	6.13	6.41	7.45	10.15	10.23	10.38	13.56	23.08	11.54	13.71	4.97
05	4.15	5.80	6.84	7.06	8.67	9.80	12.32	9.62	19.27	10.17	24.03	4.84
06	4.56	6.20	6.64	7.40	8.90	8.70	13.01	15.56	15.56	14.16	32.23	5.22
07	4.71	6.77	7.33	8.06	9.80	9.85	11.26	11.57	14.53	13.00	20.26	5.49
08	4.71	6.46	7.61	8.23	8.98	10.21	13.60	12.06	12.82	11.03	12.58	5.49
09	4.95	6.69	7.40	8.79	12.32	9.94	11.51	11.24	18.46	24.59	24.05	5.75
10	4.90	6.48	7.55	8.05	14.16	11.96	20.96	12.50	10.71	13.79	30.23	5.69
11	5.59	7.92	8.56	9.05	13.42	12.80	13.16	15.71	19.70	24.05	24.36	6.53
12	5.57	8.16	8.85	9.84	14.13	12.23	17.54	15.27	23.26	13.59	39.60	6.56
13	5.79	7.75	9.35	8.22	14.32	11.89	16.24	14.55	14.49	16.09	28.09	6.62
14	5.32	7.38	6.88	9.63	12.33	11.68	18.37	11.63	12.50	11.76	21.74	6.16
15	5.92	8.43	8.80	8.66	17.31	12.09	6.56	25.49	19.05	15.79	21.74	6.90
16	5.54	8.13	9.93	8.13	15.79	14.62	23.53	16.28	22.22	10.00	22.22	6.67
17	5.01	7.19	6.25	9.19	10.26	8.75	16.00	5.56	.00	.00	44.44	5.77
18	5.20	6.36	8.58	8.47	17.50	14.12	15.15	20.00	.00	.00	53.33	6.26
19	5.87	7.36	9.85	9.94	9.64	8.05	11.54	9.09	.00	50.00	20.00	6.69
20	6.02	7.50	9.66	8.21	15.46	5.81	7.69	19.05	12.50	25.00	50.00	6.86
21	7.45	8.97	10.30	11.81	21.25	15.94	24.69	22.54	27.27	15.38	47.62	8.52
22	8.13	9.59	12.50	13.33	14.93	11.48	.00	8.33	.00	.00	66.67	9.03
23	4.85	7.86	9.50	8.35	10.00	16.84	23.81	13.33	.00	57.14	12.50	5.81
24	6.38	6.77	9.38	11.20	15.53	13.86	10.26	15.00	14.29	.00	33.33	7.03
25	6.27	6.91	7.72	5.61	12.20	9.26	7.69	25.00	.00	25.00	66.67	6.58
26	6.16	8.10	8.64	14.64	15.63	11.84	39.13	19.05	25.00	25.00	37.50	7.29
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	4.82	6.68	7.49	8.69	11.24	10.57	13.55	13.24	17.47	13.91	24.30	5.39

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFIC[illegible]ON DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 2 ALL OPERATORS 20-22 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	1.79	3.23	6.67	.00	.00	50.00	.00	.00	.00	.00	.00	2.65
01	6.60	6.64	8.64	9.62	12.00	17.46	23.53	28.57	9.09	.00	18.18	7.53
02	7.30	8.85	11.26	11.30	10.64	5.83	21.95	18.52	16.00	11.76	23.53	8.77
03	7.45	8.26	10.68	11.54	15.20	13.89	12.71	13.64	9.76	28.21	10.45	8.75
04	7.09	9.99	10.14	12.78	12.47	15.34	14.29	16.36	9.62	16.67	28.42	8.97
05	7.43	9.41	10.89	10.55	14.92	15.01	13.41	16.50	13.56	22.03	25.58	9.05
06	7.49	10.04	11.15	11.80	16.44	16.37	14.20	19.83	19.39	14.55	18.39	9.48
07	7.85	10.31	11.52	10.47	14.91	15.22	18.55	16.95	12.94	19.28	20.93	9.58
08	9.38	11.31	12.15	13.19	16.02	13.71	18.48	16.28	26.47	17.31	20.19	10.99
09	8.23	9.87	10.74	12.19	16.92	18.23	20.00	12.90	37.84	12.50	30.91	10.01
10	9.33	13.10	14.73	14.32	21.95	17.89	18.87	14.71	12.50	.00	35.14	11.81
11	8.90	10.95	13.83	12.81	19.07	20.00	25.69	18.18	18.75	13.95	49.02	11.14
12	8.90	10.95	13.96	14.47	17.54	16.38	26.55	23.08	13.89	19.35	32.14	10.83
13	10.36	12.15	11.36	15.66	16.84	18.59	19.39	14.29	23.08	23.81	22.88	11.68
14	11.28	13.20	15.29	16.35	11.76	27.27	26.32	18.18	.00	28.57	33.33	13.17
15	11.28	12.50	12.64	23.78	12.82	26.32	27.27	7.69	80.00	100.00	50.00	14.15
16	10.66	12.64	12.78	23.81	10.81	15.38	57.14	.00	37.50	28.57	14.29	13.06
17	10.13	9.71	17.81	18.18	9.52	30.00	16.67	20.00	50.00	.00	.00	11.98
18	10.91	12.17	8.47	16.36	14.29	7.69	9.09	60.00	.00	.00	25.00	11.70
19	7.49	7.35	18.42	16.67	33.33	20.00	20.00	.00	.00	.00	.00	9.48
20	8.95	10.92	21.25	8.16	9.52	50.00	50.00	50.00	.00	25.00	20.00	12.12
21	13.37	14.54	18.63	15.45	20.00	25.00	.00	14.29	20.00	.00	50.00	14.49
22	10.92	8.82	4.00	16.67	.00	.00	.00	100.00	.00	.00	200.00	11.29
23	10.53	10.39	11.11	16.13	30.00	16.67	.00	.00	.00	.00	.00	10.93
24	9.09	9.73	16.67	18.00	30.77	6.25	.00	50.00	200.00	.00	.00	10.81
25	10.34	12.77	10.97	12.50	33.89	25.00	66.67	.00	.00	.00	.00	12.78
26	10.03	14.58	10.29	24.32	18.18	8.33	.00	14.29	100.00	25.00	80.00	12.58
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	8.39	10.35	11.83	12.78	15.88	16.07	18.42	17.41	18.47	19.14	25.57	10.12

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 3 ONE OR MORE OPERATORS 20-22 YEARS, ANOTHER 23 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	3.45	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.63
01	6.78	8.45	7.64	11.76	.00	5.88	.00	.00	.00	.00	100.00	7.49
02	7.80	7.65	7.94	9.63	20.00	6.25	8.33	50.00	.00	.00	.00	8.24
03	7.85	9.94	9.98	9.51	13.51	6.49	26.09	11.76	.00	14.29	13.33	8.87
04	7.43	8.81	8.44	10.02	17.32	10.71	11.11	14.29	30.00	37.50	5.88	8.42
05	7.23	9.04	9.75	8.43	17.76	12.87	9.52	23.81	36.36	7.14	16.67	8.48
06	7.17	8.57	10.50	9.30	17.59	18.60	25.00	9.09	38.46	12.50	10.53	8.66
07	8.15	9.29	11.04	10.36	12.90	15.25	15.52	21.21	.00	75.00	15.00	9.38
08	7.26	9.93	12.47	15.46	17.43	8.11	16.67	22.22	33.33	.00	9.52	9.63
09	8.72	8.87	12.09	10.13	9.43	8.16	5.00	7.69	33.33	.00	11.11	9.28
10	10.13	9.41	11.07	15.46	19.05	12.20	8.33	25.00	.00	.00	25.00	10.81
11	8.66	8.96	11.70	10.96	9.68	11.24	22.73	20.83	44.44	.00	33.33	9.67
12	8.98	10.92	11.17	10.71	19.42	17.78	10.26	16.00	.00	.00	20.00	10.17
13	9.53	9.03	12.96	12.68	16.00	16.92	26.09	7.69	.00	33.33	27.27	10.54
14	12.35	10.92	6.19	5.66	20.00	18.75	50.00	.00	.00	.00	.00	11.08
15	10.66	12.63	9.86	11.86	.00	37.50	50.00	.00	.00	.00	.00	11.22
16	9.32	8.49	12.33	13.79	20.00	14.29	.00	.00	.00	.00	.00	10.15
17	10.49	15.79	2.94	3.23	14.29	.00	.00	.00	100.00	.00	.00	10.00
18	7.98	7.58	15.15	7.41	.00	.00	.00	.00	.00	.00	.00	8.20
19	9.46	9.09	5.00	33.33	.00	.00	.00	.00	.00	.00	.00	9.92
20	10.37	16.00	12.50	8.57	20.00	.00	.00	.00	.00	.00	.00	11.24
21	8.13	11.29	8.54	7.27	27.27	20.00	.00	66.67	.00	.00	.00	9.51
22	11.90	.00	20.00	.00	.00	.00	.00	.00	.00	.00	.00	9.46
23	8.40	20.45	3.57	20.00	.00	.00	50.00	.00	.00	.00	.00	11.06
24	9.77	7.02	19.46	9.09	33.33	25.00	.00	.00	.00	.00	.00	10.96
25	19.22	11.76	5.26	.00	33.33	.00	100.00	.00	.00	.00	.00	13.57
26	10.29	4.00	12.12	16.13	.00	.00	.00	.00	.00	100.00	.00	9.63
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	8.16	9.31	10.96	10.84	15.43	12.58	15.74	16.80	22.91	18.00	15.00	9.30

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASS[illegible]CATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 4 ALL OPERATORS 16-19 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	7.84	11.11	22.22	.00	.00	.00	.00	.00	.00	.00	.00	9.21
01	10.80	12.09	11.83	11.03	28.57	6.45	33.33	23.08	.00	.00	60.00	11.48
02	12.32	13.45	12.77	22.56	14.29	19.23	11.54	29.41	33.33	.00	.00	13.44
03	12.98	11.94	12.02	14.43	21.94	16.41	14.06	35.71	19.05	20.00	30.00	13.34
04	13.57	13.78	14.25	14.43	15.53	11.49	20.00	25.00	16.67	20.00	12.50	13.85
05	14.34	12.33	15.85	18.03	18.02	20.00	24.66	22.64	42.11	38.89	34.48	15.01
06	15.86	12.29	13.79	16.89	21.74	21.26	34.15	18.52	20.00	35.00	34.38	15.98
07	15.41	13.25	14.40	18.42	22.61	26.75	20.00	21.13	21.21	36.36	47.62	15.95
08	16.22	12.70	15.25	18.15	18.14	18.08	28.57	23.33	24.39	16.67	14.71	16.24
09	17.18	18.11	15.19	16.53	18.33	15.15	20.83	4.55	28.57	.00	29.41	17.05
10	18.99	12.20	16.88	14.72	20.00	19.05	33.33	25.00	22.22	37.50	.00	18.15
11	17.46	11.97	16.95	19.84	21.36	32.05	23.91	51.85	33.33	42.86	7.14	17.79
12	17.95	14.55	16.02	16.25	19.13	30.61	20.00	41.38	55.56	33.33	41.67	17.93
13	19.24	14.04	15.79	21.49	21.88	23.38	20.00	25.00	.00	28.57	112.50	19.12
14	17.41	14.00	19.67	24.00	20.00	28.57	25.00	.00	.00	50.00	100.00	18.42
15	20.84	13.73	13.95	18.84	26.67	33.33	14.29	75.00	.00	50.00	100.00	20.62
16	18.07	15.91	19.70	22.41	41.18	15.38	50.00	20.00	.00	100.00	.00	19.35
17	13.71	9.52	8.00	27.78	.00	.00	50.00	.00	.00	200.00	50.00	15.69
18	16.02	6.67	20.69	50.00	.00	33.33	150.00	100.00	100.00	.00	.00	18.77
19	16.41	17.65	.00	55.56	20.00	.00	.00	.00	.00	.00	.00	17.54
20	20.20	17.65	7.14	9.09	20.00	.00	.00	.00	.00	.00	.00	17.14
21	15.56	12.12	17.39	22.86	57.14	16.67	.00	.00	.00	.00	100.00	16.28
22	14.12	25.00	.00	33.33	100.00	.00	.00	.00	.00	.00	.00	16.33
23	12.57	15.38	6.67	.00	.00	66.67	.00	.00	.00	.00	.00	12.44
24	16.34	20.00	16.00	31.25	8.33	100.00	100.00	.00	.00	.00	50.00	18.35
25	15.79	.00	14.29	22.22	50.00	33.33	.00	.00	.00	.00	.00	15.66
26	15.18	6.67	25.00	30.43	33.33	60.00	.00	200.00	.00	.00	.00	17.63
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	15.61	13.16	14.74	17.59	20.08	20.87	23.84	25.88	23.48	31.10	32.08	15.81

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES.

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 5 ONE OR MORE OPERATORS 16-19 YEARS, ANOTHER 20 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	20.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12.50
01	10.20	9.94	12.55	11.64	20.00	17.14	.00	.00	.00	20.00	.00	10.64
02	11.28	13.32	12.87	16.67	8.33	14.81	4.17	23.08	.00	75.00	50.00	12.44
03	11.69	12.93	11.99	12.83	23.33	12.40	23.68	18.18	25.00	.00	.00	12.30
04	11.77	12.84	11.79	15.84	18.44	16.84	19.23	23.53	46.15	.00	12.50	12.66
05	11.14	14.52	13.01	14.81	17.01	19.59	24.32	20.83	15.38	15.38	25.00	12.63
06	11.26	13.85	15.37	12.47	17.10	21.43	20.75	16.67	100	33.33	42.86	12.71
07	13.02	16.01	14.81	17.02	19.31	21.53	21.62	17.86	8.67	42.86	14.29	14.49
08	13.17	15.83	16.35	15.95	21.67	14.81	11.11	20.00	31.25	33.33	33.33	14.61
09	12.76	13.55	18.22	15.48	12.00	22.47	52.17	23.53	.00	66.67	.00	14.24
10	13.65	14.04	14.32	16.96	13.85	13.73	13.33	20.00	66.67	.00	75.00	14.29
11	11.85	15.72	17.38	16.67	23.86	27.06	16.67	46.15	33.33	40.00	14.29	14.34
12	14.01	18.21	13.39	16.84	17.09	20.39	25.00	7.14	60.00	.00	42.86	15.14
13	15.37	17.12	17.96	11.04	18.18	19.67	14.29	25.00	75.00	37.50	25.00	15.72
14	17.54	13.87	14.13	14.10	15.38	20.00	14.29	40.00	100.00	.00	.00	16.40
15	11.32	19.09	14.89	30.56	33.33	.00	20.00	.00	.00	.00	.00	15.24
16	13.39	17.31	18.35	13.39	50.00	.00	33.33	.00	.00	.00	.00	15.11
17	11.90	17.95	14.29	15.56	.00	.00	.00	.00	100.00	.00	.00	13.22
18	9.89	9.62	12.82	29.03	14.29	.00	.00	.00	.00	.00	.00	11.91
19	11.24	7.41	27.27	40.74	.00	.00	.00	.00	.00	.00	.00	17.26
20	15.12	11.43	7.32	11.11	22.22	.00	100.00	.00	.00	.00	100.00	14.01
21	9.19	14.44	15.79	7.27	.00	27.27	.00	50.00	.00	.00	.00	10.75
22	13.33	22.22	20.00	.00	.00	.00	.00	.00	.00	.00	.00	13.73
23	10.48	15.63	12.50	27.27	.00	.00	.00	.00	.00	.00	.00	12.36
24	8.78	14.04	13.91	16.67	14.29	100.00	.00	.00	.00	.00	.00	11.74
25	11.22	5.88	13.33	30.77	.00	100.00	.00	.00	.00	.00	.00	13.51
26	11.60	15.63	10.26	37.84	.00	.00	.00	.00	.00	.00	.00	14.54
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	12.37	14.62	14.46	15.39	18.38	18.30	19.96	19.42	28.89	28.92	20.00	13.61

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 6 ONE OR MORE OPERATORS 69 YEARS OR OLDER, NONE UNDER 23

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	1.25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.08
01	4.09	6.12	5.71	6.72	15.00	6.98	.00	.00	.00	.00	.00	4.39
02	4.16	6.57	5.76	6.52	5.13	14.29	.00	33.33	.00	.00	100.00	4.50
03	4.52	6.55	6.27	7.95	8.96	14.93	.00	.00	.00	.00	66.67	4.90
04	4.44	7.11	5.66	8.47	10.00	13.22	27.78	7.69	.00	20.00	.00	4.90
05	4.46	6.14	6.97	8.03	11.54	12.50	13.33	22.22	.00	66.67	33.33	4.91
06	4.73	7.25	7.64	7.17	8.49	12.39	36.00	14.29	100.00	.00	.00	5.22
07	5.47	7.54	9.69	8.22	13.58	11.11	35.48	15.38	80.00	.00	25.00	6.03
08	4.82	7.52	6.85	6.17	7.23	17.48	.00	6.67	33.33	.00	33.33	5.21
09	5.30	7.72	9.39	7.07	24.53	8.77	18.18	.00	.00	.00	33.33	5.84
10	4.52	8.61	8.37	7.05	9.30	9.84	71.43	.00	.00	.00	.00	5.17
11	5.39	8.28	10.79	8.59	14.67	14.00	36.36	.00	66.67	.00	100.00	6.13
12	5.79	7.84	9.79	9.04	8.75	16.88	30.00	20.00	.00	.00	.00	6.39
13	5.23	7.98	8.66	7.28	15.71	6.33	20.00	18.75	.00	.00	.00	5.71
14	5.40	9.90	11.28	3.97	23.08	23.53	.00	.00	.00	.00	.00	6.09
15	4.67	9.93	8.62	10.31	.00	45.45	.00	.00	.00	.00	.00	5.63
16	5.62	10.31	8.72	3.62	40.00	6.67	50.00	.00	50.00	.00	.00	6.17
17	4.94	6.40	10.47	4.11	9.09	.00	100.00	.00	100.00	.00	.00	5.36
18	5.72	6.12	16.67	11.54	.00	.00	100.00	.00	100.00	.00	.00	6.58
19	5.72	13.43	6.52	7.50	12.50	16.67	.00	.00	.00	.00	.00	6.47
20	3.80	5.38	4.35	8.96	.00	16.67	.00	.00	.00	.00	.00	4.22
21	5.46	7.61	11.11	8.57	33.33	26.67	.00	.00	.00	.00	.00	6.19
22	10.24	7.89	13.79	8.33	33.33	20.00	.00	.00	.00	.00	.00	10.37
23	5.64	12.99	11.72	8.89	.00	.00	.00	.00	50.00	.00	.00	6.12
24	4.70	9.09	12.05	8.57	10.00	.00	100.00	.00	.00	.00	.00	5.72
25	3.24	.00	.00	6.90	50.00	.00	.00	50.00	.00	.00	.00	3.49
26	4.82	11.11	9.52	7.41	.00	25.00	.00	.00	.00	.00	.00	5.55
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	4.94	7.43	8.12	7.74	11.59	13.12	27.08	12.28	22.73	12.77	28.95	5.45

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS 7 OPERATOR DATE OF BIRTH NOT GIVEN

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	4.17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.17
01	2.13	9.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.32
02	1.82	.00	.00	.00	.00	200.00	.00	.00	.00	.00	.00	2.22
03	2.59	9.68	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.74
04	2.42	3.23	.00	25.00	.00	.00	.00	.00	.00	.00	.00	2.48
05	2.35	8.11	.00	.00	.00	.00	.00	100.00	.00	.00	.00	2.55
06	2.99	6.45	.00	150.00	.00	.00	.00	.00	.00	.00	.00	3.39
07	3.45	2.38	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.41
08	2.61	3.70	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.61
09	1.95	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.94
10	3.21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.13
11	4.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.89
12	3.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.12
13	2.40	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.35
14	5.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.00
15	1.89	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.89
16	1.20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.20
17	3.57	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.57
18	5.26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.26
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	2.08	50.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.92
22	.00	100.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.14
23	1.22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.20
24	2.50	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.50
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	2.72	9.09	2.00	9.76	.00	40.00	.00	100.00	2.00	.00	.00	2.81

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

SAFE DRIVER CLASSIFICATION DATA

AT-FAULT ACCIDENT CLAIMS PER 100 POLICY YEARS

AGE CLASS ALL

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	2.66	4.39	7.84	.00	33.33	50.00	.00	.00	.00	.00	.00	8.40
01	4.53	6.24	6.53	7.19	12.20	9.06	18.85	16.50	11.76	6.38	28.21	5.11
02	4.74	6.71	7.24	8.86	9.91	10.15	12.86	15.97	20.27	10.94	14.44	5.59
03	5.00	6.76	7.67	8.19	13.05	10.79	12.91	13.04	13.79	15.48	19.63	5.78
04	5.15	7.35	7.66	9.41	12.22	11.76	13.15	15.70	20.19	14.16	17.69	6.08
05	5.09	6.99	8.24	8.92	11.82	11.96	14.03	13.91	20.19	17.11	29.09	5.98
06	5.51	7.38	8.38	8.95	12.37	12.15	17.41	16.63	18.10	17.82	27.01	6.42
07	5.73	7.93	8.89	9.71	12.67	12.63	14.76	14.40	14.46	19.06	22.57	6.71
08	5.85	7.90	9.33	10.19	12.44	11.73	16.05	14.97	20.47	13.54	16.22	6.87
09	6.06	7.84	9.14	9.98	14.09	12.17	16.08	11.37	24.80	20.59	25.15	7.02
10	5.93	7.94	9.32	9.99	15.67	13.20	21.82	14.56	15.25	12.28	32.26	6.95
11	6.51	8.81	10.30	10.59	15.61	15.29	17.82	20.11	24.00	21.57	31.68	7.67
12	6.47	9.04	9.99	10.91	14.90	14.52	19.62	18.50	23.08	14.74	35.57	7.54
13	6.69	8.70	10.30	9.79	15.52	13.52	17.54	15.54	15.57	20.00	30.67	7.62
14	6.50	8.64	8.90	10.37	13.98	15.23	21.35	13.24	10.34	18.52	27.78	7.49
15	6.75	9.51	9.70	12.23	16.55	17.16	13.40	22.97	27.59	37.93	39.13	8.07
16	6.46	9.34	11.14	10.51	19.57	13.51	30.61	12.31	24.00	20.69	15.79	7.81
17	5.77	8.33	8.14	10.00	9.38	8.77	17.78	7.41	23.53	57.14	37.50	6.72
18	6.14	7.02	9.99	11.68	14.53	12.39	21.15	27.59	18.18	.00	39.13	7.27
19	6.20	7.87	10.34	13.21	12.15	9.00	11.76	5.88	.00	42.86	10.00	7.20
20	6.50	8.19	10.24	8.51	14.69	9.92	20.51	21.43	7.69	20.00	42.86	7.45
21	7.80	9.43	11.09	11.78	21.57	17.63	20.62	22.99	23.81	11.11	48.28	8.89
22	8.60	9.66	12.26	12.94	15.66	11.27	.00	14.29	20.00	.00	100.00	9.39
23	9.36	8.70	9.01	9.43	10.37	17.12	22.22	11.11	14.29	50.00	10.00	6.29
24	6.65	7.48	10.85	12.04	16.56	14.50	16.00	17.24	30.00	16.67	21.43	7.54
25	6.70	7.03	7.85	7.94	23.81	14.49	22.22	20.00	.00	16.67	66.67	7.29
26	6.65	8.96	9.59	17.10	14.14	12.84	26.47	21.21	28.57	27.27	41.18	8.03
ERROR	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
ALL	5.74	7.79	9.68	9.72	13.43	12.60	16.21	15.63	20.79	17.18	24.75	6.71

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSE FILE

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

9. NO REDUCTION OF POINTS FOR SURCHARGES PAID UNDER THE MERIT RATING PLAN

MERIT RATING BOARD EXPOSURES

CREDIT ELIGIBLE

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	44395	2274	826	0	1490	0	48985
2	41133	2150	859	0	1667	0	45809
3	102720	5921	2472	0	5254	0	116367
4	139999	8804	3539	0	6984	0	159326
5	146345	8668	3015	0	5861	0	163889
6	128066	7706	2929	0	5764	0	144465
7	197837	11618	4284	0	7828	0	221567
8	131133	8419	2877	0	5650	0	148079
9	66889	4571	1456	0	2602	0	75518
10	45538	2776	1066	0	1707	0	51087
11	75432	5190	1767	0	2574	0	84963
12	129560	8056	2916	0	4318	0	144850
13	90039	5512	1794	0	2551	0	99896
14	13516	798	332	0	456	0	15102
15	14714	966	272	0	380	0	16332
16	13874	835	311	0	433	0	15453
17	6811	375	162	0	252	0	7600
18	5795	394	163	0	182	0	6534
19	6373	334	74	0	89	0	6870
20	6224	391	135	0	172	0	6922
21	19935	1204	320	0	359	0	21818
22	4320	229	42	0	30	0	4621
23	11090	722	131	0	105	0	12048
24	9714	759	174	0	148	0	10795
25	3984	261	92	0	98	0	4435
26	6362	349	136	0	181	0	7028
CLASS TOT.	1461798	89282	32144	0	57135	0	1640359

MERIT RATING BOARD EXPOSURES

NO SURCHARGE; NO CREDIT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	6334	648	284	2020	483	0	9769
2	7106	791	340	2145	638	0	11020
3	17165	2083	946	5865	1755	0	27814
4	24745	2983	1453	7503	2445	0	39129
5	23685	2849	1140	8466	1860	0	38000
6	22154	2719	1167	7401	1848	0	35289
7	33812	4024	1777	10312	2505	0	52430
8	23118	3077	1208	8151	1882	0	37436
9	11500	1601	564	4133	797	0	18595
10	7169	878	404	2059	520	0	11030
11	12370	1735	692	4282	846	0	19925
12	20018	2074	971	5230	1153	0	29446
13	13810	1473	642	3799	730	0	20454
14	2279	250	119	521	137	0	3306
15	2428	272	95	598	110	0	3503
16	2326	269	106	531	156	0	3388
17	1085	103	57	196	78	0	1519
18	1105	115	66	221	52	0	1559
19	1086	68	22	145	27	0	1348
20	1147	119	50	215	35	0	1566
21	3842	227	124	592	90	0	4875
22	768	34	12	89	9	0	912
23	1579	77	44	196	32	0	1928
24	1429	113	57	217	57	0	1873
25	520	47	17	143	17	0	744
26	977	96	50	254	64	0	1441
CLASS TOT.	243557	28725	12407	75284	18326	0	378299

MERIT RATING BOARD EXPOSURES

'1' SAFE DRIVER POINT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	2975	324	144	186	247	0	3876
2	3689	382	189	282	373	0	4915
3	8542	1180	551	649	1009	0	11931
4	12850	1617	806	905	1544	0	17722
5	12644	1579	687	896	1161	0	16967
6	11763	1596	695	863	1262	0	16179
7	18286	2318	987	1139	1641	0	24371
8	12302	1860	762	938	1254	0	17116
9	6344	903	339	441	527	0	8554
10	4215	550	244	231	384	0	5624
11	6954	1012	376	419	507	0	9268
12	10957	1232	618	493	762	0	14062
13	7876	924	378	361	529	0	10068
14	1267	157	97	61	92	0	1674
15	1525	182	71	86	94	0	1958
16	1277	180	73	66	109	0	1705
17	630	73	34	25	49	0	811
18	631	59	33	29	39	0	791
19	655	38	20	10	22	0	745
20	628	80	24	28	41	0	801
21	2107	161	82	46	57	0	2453
22	421	25	10	4	5	0	465
23	900	54	28	15	24	0	1021
24	872	90	36	25	37	0	1060
25	295	46	19	7	15	0	382
26	528	68	33	20	39	0	688
CLASS TOT.	131133	16690	7336	8225	11823	0	175207

MERIT RATING BOARD EXPOSURES

'2' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	2000	208	85	145	189	0	2627
2	2267	292	135	195	282	0	3171
3	5677	728	368	506	873	0	8152
4	8301	1017	529	693	1225	0	11765
5	8293	1062	439	771	959	0	11524
6	7870	1076	527	681	994	0	11148
7	12412	1547	743	950	1410	0	17062
8	8300	1190	498	766	1066	0	11820
9	4424	607	237	357	465	0	6090
10	2851	384	194	197	336	0	3962
11	5009	687	292	383	480	0	6851
12	8601	933	504	480	784	0	11302
13	5733	664	276	377	480	0	7530
14	863	104	53	50	78	0	1148
15	998	143	59	69	72	0	1341
16	950	126	58	58	112	0	1304
17	432	44	31	18	45	0	570
18	406	55	27	12	31	0	531
19	402	30	9	9	27	0	477
20	457	49	35	22	36	0	599
21	1434	110	55	35	55	0	1689
22	309	18	5	3	5	0	340
23	512	31	20	9	11	0	583
24	561	50	22	16	24	0	673
25	225	24	6	9	13	0	277
26	375	37	31	23	37	0	503
CLASS TOT.	89662	11216	5238	6834	10089	0	123039

MERIT RATING BOARD EXPOSURES

'3' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	274	50	21	35	30	0	410
2	402	94	35	63	72	0	666
3	911	250	74	155	150	0	1540
4	1430	369	127	219	244	0	2389
5	1430	382	107	222	194	0	2335
6	1465	371	108	230	193	0	2367
7	2141	503	155	283	233	0	3315
8	1453	412	109	226	203	0	2403
9	743	201	53	120	75	0	1192
10	502	123	21	55	65	0	766
11	850	236	62	103	88	0	1339
12	1441	285	103	115	117	0	2061
13	985	196	50	96	77	0	1404
14	159	34	15	15	13	0	236
15	217	39	13	15	12	0	296
16	157	37	10	17	14	0	235
17	89	21	7	4	7	0	128
18	84	14	5	7	7	0	117
19	91	9	0	5	2	0	107
20	103	21	5	5	9	0	143
21	293	35	11	7	11	0	357
22	70	6	3	2	2	0	83
23	115	10	7	2	1	0	135
24	113	13	6	12	7	0	151
25	43	13	3	2	2	0	63
26	72	11	5	6	5	0	99
CLASS TOT.	15633	3735	1115	2021	1833	0	24337

MERIT RATING BOARD EXPOSURES

'4' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	439	63	17	31	35	0	585
2	507	103	32	52	54	0	748
3	1145	216	77	128	129	0	1695
4	1656	378	112	174	196	0	2516
5	1895	373	101	175	148	0	2692
6	1573	342	86	174	154	0	2329
7	2612	473	177	243	209	0	3714
8	1847	394	111	177	189	0	2718
9	952	192	49	99	89	0	1381
10	546	123	41	42	51	0	803
11	1217	205	89	78	85	0	1674
12	1634	293	90	98	103	0	2218
13	1181	199	65	77	61	0	1583
14	231	33	16	7	15	0	302
15	193	38	8	18	11	0	268
16	227	26	14	13	16	0	296
17	85	10	4	3	12	0	114
18	87	13	6	3	4	0	113
19	93	5	2	0	0	0	100
20	92	12	4	5	8	0	121
21	291	28	10	6	11	0	346
22	66	3	2	0	0	0	71
23	97	6	3	3	2	0	111
24	108	16	4	1	2	0	131
25	55	8	1	3	2	0	69
26	80	12	8	5	4	0	109
CLASS TOT.	18909	3564	1129	1615	1590	0	26807

MERIT RATING BOARD EXPOSURES

'5' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	116	34	5	15	8	0	178
2	138	41	12	26	24	0	241
3	307	118	23	64	38	0	550
4	461	168	45	80	52	0	806
5	510	179	42	73	37	0	841
6	417	176	36	82	53	0	764
7	768	221	58	105	74	0	1226
8	490	211	36	84	45	0	866
9	289	105	20	48	23	0	485
10	174	53	12	21	15	0	275
11	315	109	22	46	30	0	522
12	402	113	39	45	28	0	627
13	324	98	23	30	21	0	496
14	51	19	4	8	7	0	89
15	61	22	2	7	5	0	97
16	70	14	2	6	6	0	98
17	27	6	2	2	8	0	45
18	35	11	1	2	3	0	52
19	27	5	1	0	1	0	34
20	26	6	2	2	3	0	39
21	82	10	2	3	0	0	97
22	14	2	0	0	0	0	16
23	22	2	2	0	1	0	27
24	40	5	0	3	2	0	50
25	13	3	1	1	0	0	18
26	23	6	2	1	2	0	34
CLASS TOT.	5202	1737	394	754	486	0	8573

MERIT RATING BOARD EXPOSURES

'6' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	58	21	2	13	9	0	103
2	83	27	4	17	13	0	144
3	189	66	17	28	22	0	322
4	330	110	28	52	34	0	554
5	330	103	21	53	24	0	531
6	284	121	22	54	30	0	511
7	510	177	33	71	56	0	847
8	330	129	27	60	35	0	581
9	185	62	13	22	17	0	299
10	99	34	8	12	5	0	158
11	218	66	24	27	13	0	348
12	295	91	25	29	14	0	454
13	229	63	13	24	12	0	341
14	46	11	2	4	5	0	68
15	51	13	2	4	4	0	74
16	44	8	3	5	5	0	65
17	19	5	2	1	0	0	27
18	20	5	2	1	1	0	29
19	13	2	1	1	0	0	17
20	21	4	1	1	1	0	28
21	74	7	3	1	2	0	87
22	13	1	0	0	0	0	14
23	16	2	0	0	0	0	18
24	21	4	1	1	2	0	29
25	10	3	0	1	1	0	15
26	21	7	1	1	3	0	33
CLASS TOT.	3509	1142	255	483	308	0	5697

MERIT RATING BOARD EXPOSURES

'7' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	21	11	0	1	1	0	34
2	35	25	0	9	5	0	74
3	70	41	5	21	8	0	145
4	109	52	10	24	13	0	208
5	111	59	11	19	13	0	213
6	91	62	13	30	14	0	210
7	177	85	15	33	15	0	325
8	120	68	9	41	16	0	254
9	67	37	3	14	4	0	125
10	30	16	1	9	3	0	59
11	69	32	9	12	3	0	125
12	90	36	3	9	5	0	143
13	74	26	5	13	4	0	122
14	16	9	1	2	1	0	29
15	21	5	2	1	0	0	29
16	11	8	1	3	2	0	25
17	12	2	1	0	2	0	17
18	7	3	0	1	0	0	11
19	6	1	2	0	0	0	9
20	8	2	1	1	1	0	13
21	33	5	1	3	0	0	42
22	5	0	0	0	0	0	5
23	6	1	0	0	0	0	7
24	7	1	1	1	0	0	10
25	3	1	0	0	0	0	4
26	12	1	1	0	0	0	14
CLASS TOT.	1211	589	95	247	110	0	2252

MERIT RATING BOARD EXPOSURES

'8' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	27	8	2	5	5	0	47
2	35	17	4	4	4	0	64
3	87	39	7	10	12	0	155
4	135	60	8	15	8	0	226
5	124	59	14	18	13	0	228
6	113	55	8	20	6	0	202
7	210	83	12	22	14	0	341
8	141	52	9	12	15	0	229
9	66	16	4	10	6	0	102
10	30	13	4	8	2	0	57
11	82	43	9	14	5	0	153
12	106	31	7	9	3	0	156
13	88	21	6	7	8	0	130
14	17	7	1	2	0	0	27
15	19	7	1	2	0	0	29
16	20	7	0	2	0	0	29
17	3	2	0	2	0	0	7
18	9	2	0	0	0	0	11
19	6	1	0	0	0	0	7
20	4	4	1	1	0	0	10
21	15	1	1	0	1	0	18
22	5	0	0	0	0	0	5
23	7	0	0	0	1	0	8
24	6	0	0	0	0	0	6
25	4	1	1	0	0	0	6
26	4	4	1	1	1	0	11
CLASS TOT.	1363	533	100	164	104	0	2264

MERIT RATING BOARD EXPOSURES

'OVER 8' SAFE DRIVER PTS.

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	18	11	2	5	3	0	39
2	37	34	4	13	2	0	90
3	85	67	15	30	17	0	214
4	126	95	17	32	24	0	294
5	132	86	24	29	8	0	279
6	122	87	19	32	14	0	274
7	231	129	20	42	21	0	443
8	168	104	21	34	12	0	339
9	82	55	9	17	8	0	171
10	43	37	4	5	4	0	93
11	80	51	9	14	7	0	161
12	104	56	15	12	7	0	194
13	92	35	11	8	4	0	150
14	25	6	1	3	1	0	36
15	23	16	1	5	1	0	46
16	18	14	3	2	1	0	38
17	9	2	0	4	1	0	16
18	16	4	2	1	0	0	23
19	6	3	0	1	0	0	10
20	8	5	0	0	1	0	14
21	21	6	1	1	0	0	29
22	3	1	0	0	0	0	4
23	8	1	0	0	1	0	10
24	6	4	0	2	2	0	14
25	3	0	0	0	0	0	3
26	8	5	2	1	1	0	17
CLASS TOT.	1474	914	180	293	140	0	3001

MERIT RATING BOARD EXPOSURES

TOTAL FOR ALL CATEGORIES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	56657	3652	1388	2456	2500	0	66653
2	55432	3956	1614	2806	3134	0	66942
3	136898	10709	4555	7456	9267	0	168885
4	190142	15653	6674	9697	12769	0	234935
5	195499	15399	5601	10722	10278	0	237499
6	173918	14311	5610	9567	10332	0	213738
7	268996	21178	8261	13200	14006	0	325641
8	179402	15916	5667	10489	10367	0	221841
9	91541	8350	2747	5261	4613	0	112512
10	61197	4987	1999	2639	3092	0	73914
11	102596	9366	3351	5378	4638	0	125329
12	173208	13200	5291	6520	7294	0	205513
13	120431	9211	3263	4792	4477	0	142174
14	18470	1428	641	673	805	0	22017
15	20250	1703	526	805	689	0	23973
16	18974	1524	581	703	854	0	22636
17	9202	643	300	255	454	0	10854
18	8195	675	305	277	319	0	9771
19	8758	496	131	171	168	0	9724
20	8718	693	258	280	307	0	10256
21	28127	1794	610	694	586	0	31811
22	5994	319	74	98	51	0	6536
23	14352	906	235	225	178	0	15896
24	12877	1055	301	278	281	0	14792
25	5155	407	140	166	148	0	6016
26	8462	596	270	312	337	0	9977
CLASS TOT.	1973451	158127	60393	95920	101944	0	2389835

MERIT RATING BOARD CLAIMS

CREDIT ELIGIBLE

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	1756	150	56	0	152	0	2114
2	1630	157	67	0	188	0	2042
3	4177	441	194	0	614	0	5426
4	5981	624	263	0	822	0	7690
5	6149	644	218	0	653	0	7664
6	5876	577	210	0	649	0	7312
7	9567	912	349	0	1019	0	11847
8	6195	790	209	0	744	0	7938
9	3347	376	127	0	332	0	4182
10	2201	259	108	0	233	0	2801
11	4190	462	153	0	305	0	5110
12	7268	717	262	0	605	0	8852
13	5135	571	171	0	392	0	6269
14	721	90	41	0	80	0	932
15	847	109	29	0	43	0	1028
16	770	89	29	0	58	0	946
17	340	38	17	0	30	0	425
18	307	43	13	0	18	0	381
19	373	25	7	0	10	0	415
20	349	35	14	0	26	0	424
21	1441	161	26	0	33	0	1661
22	360	25	5	0	4	0	394
23	545	76	11	0	11	0	643
24	601	69	17	0	13	0	700
25	234	27	14	0	11	0	286
26	380	35	14	0	21	0	450
CLASS TOT.	70740	7502	2624	0	7066	0	87932

MERIT RATING BOARD CLAIMS

NO SURCHARGE; NO CREDIT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	356	43	24	221	48	0	692
2	399	70	26	267	85	0	847
3	957	172	94	755	227	0	2205
4	1534	298	128	1020	314	0	3294
5	1380	268	103	1198	270	0	3219
6	1391	273	100	1146	256	0	3166
7	2309	415	165	1567	401	0	4857
8	1509	348	120	1293	298	0	3568
9	777	158	50	714	108	0	1807
10	478	115	38	377	73	0	1081
11	983	190	62	727	133	0	2095
12	1626	227	106	926	210	0	3095
13	1072	179	58	716	125	0	2150
14	173	33	13	89	19	0	327
15	207	34	12	121	21	0	395
16	194	34	9	95	27	0	359
17	77	10	9	26	14	0	136
18	70	14	5	34	5	0	128
19	84	5	2	24	2	0	117
20	84	13	8	43	4	0	152
21	342	33	14	91	13	0	493
22	73	3	0	13	2	0	91
23	128	8	9	25	5	0	175
24	99	11	4	36	8	0	158
25	34	6	2	21	1	0	64
26	81	14	2	36	10	0	143
CLASS TOT.	16417	2974	1163	11581	2679	0	34814

MERIT RATING BOARD CLAIMS

'1' SAFE DRIVER POINT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	161	28	11	22	31	0	253
2	214	43	15	36	48	0	356
3	535	126	55	78	121	0	915
4	815	164	68	129	182	0	1358
5	867	172	67	142	151	0	1399
6	792	178	73	119	194	0	1356
7	1385	267	109	164	243	0	2168
8	928	226	95	143	205	0	1597
9	481	97	41	67	96	0	782
10	322	81	27	39	55	0	524
11	612	140	44	71	88	0	955
12	983	172	69	79	102	0	1405
13	731	105	49	57	95	0	1037
14	93	24	6	12	13	0	148
15	134	23	7	12	14	0	190
16	125	23	9	13	20	0	190
17	43	13	1	2	7	0	66
18	58	5	5	6	5	0	79
19	63	7	1	0	6	0	77
20	57	17	3	2	3	0	82
21	218	30	7	8	9	0	272
22	53	1	2	0	1	0	57
23	81	6	1	1	3	0	92
24	84	15	7	4	5	0	115
25	21	5	1	1	2	0	30
26	46	7	4	5	4	0	66
CLASS TOT.	9902	1975	777	1212	1703	0	15569

MERIT RATING BOARD CLAIMS

'2' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	121	20	10	16	22	0	189
2	144	33	13	44	47	0	281
3	364	84	35	73	112	0	668
4	629	130	53	100	194	0	1106
5	598	112	37	139	142	0	1028
6	580	127	49	115	124	0	995
7	1003	162	77	175	240	0	1657
8	662	157	77	139	170	0	1205
9	379	74	24	59	72	0	608
10	225	55	30	29	57	0	396
11	450	88	32	76	80	0	726
12	834	135	54	78	132	0	1233
13	464	104	35	81	53	0	737
14	76	17	3	12	11	0	119
15	88	34	7	13	22	0	164
16	71	30	8	13	15	0	137
17	36	8	1	5	7	0	57
18	36	9	2	6	9	0	62
19	39	5	3	5	11	0	63
20	38	4	3	2	4	0	51
21	166	17	4	8	4	0	199
22	40	3	0	1	0	0	44
23	43	5	4	0	3	0	55
24	61	9	2	5	4	0	81
25	13	3	0	2	4	0	22
26	51	9	5	7	14	0	86
CLASS TOT.	7211	1434	568	1203	1553	0	11969

MERIT RATING BOARD CLAIMS

'3' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	28	6	0	10	6	0	50
2	34	10	7	9	6	0	66
3	84	38	10	34	35	0	201
4	145	46	22	34	45	0	292
5	127	57	19	40	33	0	276
6	130	61	19	50	33	0	293
7	216	75	20	64	45	0	420
8	129	66	19	41	44	0	299
9	98	34	5	22	9	0	168
10	69	27	4	11	9	0	120
11	115	45	6	22	21	0	209
12	195	50	20	22	20	0	307
13	142	33	8	21	14	0	218
14	21	4	3	3	2	0	33
15	36	5	0	4	4	0	49
16	26	4	2	7	7	0	46
17	9	2	1	0	0	0	12
18	14	2	0	0	1	0	17
19	9	3	0	1	0	0	13
20	15	2	1	1	2	0	21
21	63	7	3	4	0	0	77
22	11	0	0	2	0	0	13
23	11	3	0	0	0	0	14
24	17	4	2	1	1	0	25
25	6	7	1	1	0	0	15
26	10	2	0	2	0	0	14
CLASS TOT.	1760	593	172	406	337	0	3268

MERIT RATING BOARD CLAIMS

'4' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	33	11	1	2	6	0	53
2	48	6	2	10	8	0	74
3	111	30	5	21	16	0	183
4	173	58	12	20	33	0	296
5	189	56	13	35	29	0	322
6	141	56	16	37	33	0	283
7	260	72	27	65	45	0	469
8	196	54	9	32	28	0	319
9	94	35	4	15	20	0	168
10	64	22	5	8	7	0	106
11	157	41	10	25	23	0	256
12	207	48	16	30	21	0	322
13	136	37	11	18	12	0	214
14	29	9	3	2	3	0	46
15	27	10	3	6	0	0	46
16	32	4	2	2	0	0	40
17	7	3	0	0	0	0	10
18	12	1	0	1	0	0	14
19	8	1	0	0	0	0	9
20	6	6	0	0	0	0	12
21	48	7	2	1	3	0	61
22	8	0	0	0	0	0	8
23	16	1	0	2	0	0	19
24	14	1	1	1	2	0	19
25	5	2	0	1	2	0	10
26	10	1	0	3	0	0	14
CLASS TOT.	2031	572	142	337	291	0	3373

MERIT RATING BOARD CLAIMS

'5' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	17	8	0	5	0	0	30
2	17	9	1	3	1	0	31
3	32	15	6	9	9	0	71
4	51	24	5	16	10	0	106
5	63	24	4	18	9	0	118
6	60	25	9	28	11	0	133
7	94	41	9	21	16	0	181
8	65	39	6	24	5	0	139
9	34	21	1	10	12	0	78
10	40	10	1	7	2	0	60
11	44	28	5	11	5	0	93
12	73	30	4	9	7	0	123
13	53	19	6	6	3	0	87
14	9	5	2	2	1	0	19
15	4	6	1	1	1	0	13
16	17	3	0	3	2	0	30
17	6	1	0	1	0	0	8
18	7	1	0	3	0	0	11
19	3	1	0	0	0	0	4
20	2	3	0	0	3	0	8
21	20	0	0	0	0	0	20
22	0	0	0	0	0	0	0
23	5	0	1	0	0	0	6
24	5	0	0	3	0	0	8
25	1	2	1	0	0	0	4
26	9	0	0	0	0	0	9
CLASS TOT.	731	320	62	180	97	0	1390

MERIT RATING BOARD CLAIMS

'6' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	8	6	0	3	0	0	17
2	8	5	2	5	3	0	23
3	17	9	2	10	4	0	42
4	44	18	4	13	8	0	87
5	34	17	5	12	5	0	73
6	44	24	2	10	5	0	85
7	60	30	7	15	10	0	122
8	39	21	6	14	7	0	87
9	20	8	1	1	4	0	34
10	12	5	2	3	1	0	23
11	33	12	5	14	6	0	70
12	46	21	4	12	1	0	84
13	34	9	1	6	3	0	53
14	5	2	0	0	2	0	9
15	13	1	0	3	0	0	17
16	7	0	0	1	0	0	8
17	1	1	0	0	0	0	2
18	4	3	0	1	0	0	8
19	1	0	0	0	0	0	1
20	4	2	0	0	0	0	6
21	16	1	2	0	1	0	20
22	1	1	0	0	0	0	2
23	2	0	0	0	0	0	2
24	3	2	0	0	0	0	5
25	3	0	0	0	0	0	3
26	4	1	0	2	0	0	7
CLASS TOT.	463	199	43	125	60	0	890

MERIT RATING BOARD CLAIMS

'7' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	3	1	0	0	0	0	4
2	8	4	0	3	0	0	15
3	10	4	0	4	2	0	20
4	24	5	3	4	6	0	42
5	21	8	4	8	2	0	43
6	15	12	5	6	0	0	38
7	28	11	0	7	1	0	47
8	16	18	3	10	5	0	52
9	12	14	1	4	0	0	31
10	3	2	0	2	2	0	9
11	15	6	4	4	1	0	30
12	20	5	0	5	3	0	33
13	10	6	0	0	3	0	19
14	2	0	0	0	1	0	3
15	4	4	0	0	0	0	8
16	3	3	0	0	0	0	6
17	0	1	1	0	2	0	4
18	1	0	0	1	0	0	2
19	0	0	0	0	0	0	0
20	1	0	0	0	0	0	1
21	9	1	0	0	0	0	10
22	0	1	0	0	0	0	1
23	1	0	0	0	0	0	1
24	1	2	0	0	0	0	3
25	0	0	0	0	0	0	0
26	3	1	0	0	0	0	4
CLASS TOT.	210	109	21	58	28	0	426

MERIT RATING BOARD CLAIMS

'8' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	2	0	0	0	1	0	3
2	2	2	0	0	3	0	7
3	10	11	1	2	0	0	24
4	16	10	3	3	0	0	32
5	16	13	1	7	2	0	39
6	17	8	1	7	2	0	35
7	26	16	9	8	6	0	65
8	15	9	0	2	5	0	31
9	15	2	0	0	4	0	21
10	4	0	0	3	0	0	7
11	19	6	0	6	2	0	33
12	14	6	0	3	0	0	23
13	14	5	2	2	3	0	26
14	2	2	0	1	0	0	5
15	3	7	0	1	0	0	11
16	2	2	0	2	0	0	6
17	0	0	0	4	0	0	4
18	0	0	0	0	0	0	0
19	3	0	0	0	0	0	3
20	1	1	0	0	0	0	2
21	2	0	0	0	0	0	2
22	0	0	0	0	0	0	0
23	4	0	0	0	0	0	4
24	0	1	0	0	0	0	1
25	1	0	0	0	0	0	1
26	1	1	1	0	0	0	3
CLASS TOT.	189	102	18	51	28	0	388

MERIT RATING BOARD CLAIMS

'OVER 8' SAFE DRIVER PTS.

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	4	2	2	3	0	0	11
2	4	8	0	0	1	0	13
3	24	7	2	9	0	0	42
4	17	27	1	4	3	0	52
5	32	22	4	10	2	0	70
6	39	16	2	11	6	0	74
7	47	27	3	20	3	0	100
8	23	21	2	5	4	0	55
9	20	17	1	5	0	0	43
10	13	13	1	0	3	0	30
11	21	25	3	1	1	0	51
12	40	18	3	5	3	0	69
13	25	8	3	9	1	0	46
14	5	2	0	3	0	0	10
15	5	8	0	5	0	0	18
16	4	2	0	0	0	0	6
17	4	0	0	2	0	0	6
18	8	1	0	0	0	0	9
19	1	0	0	0	0	0	1
20	4	1	0	0	1	0	6
21	10	3	0	1	0	0	14
22	2	2	0	0	0	0	4
23	1	0	0	0	0	0	1
24	2	0	0	1	0	0	3
25	2	0	0	0	0	0	2
26	3	4	0	0	0	0	7
CLASS TOT.	360	234	27	94	28	0	743

MERIT RATING BOARD CLAIMS

TOTAL FOR ALL CATEGORIES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	2489	275	104	282	266	0	3416
2	2508	347	133	377	390	0	3755
3	6321	937	404	995	1140	0	9797
4	9429	1404	562	1343	1617	0	14355
5	9476	1393	475	1609	1298	0	14251
6	9085	1357	486	1529	1313	0	13770
7	14995	2028	775	2106	2029	0	21933
8	9777	1749	546	1703	1515	0	15290
9	5277	836	255	897	657	0	7922
10	3431	589	216	479	442	0	5157
11	6639	1043	324	957	665	0	9628
12	11306	1429	538	1169	1104	0	15546
13	7816	1076	344	916	704	0	10856
14	1136	188	71	124	132	0	1651
15	1368	241	59	166	105	0	1939
16	1251	199	59	136	129	0	1774
17	523	77	30	40	60	0	730
18	517	79	25	52	38	0	711
19	584	47	13	30	29	0	703
20	561	84	29	48	43	0	765
21	2335	260	58	113	63	0	2829
22	548	36	7	16	7	0	614
23	837	99	26	28	22	0	1012
24	887	114	33	51	33	0	1118
25	320	52	19	26	20	0	437
26	598	75	26	55	49	0	803
CLASS TOT.	110014	16014	5617	15247	13870	0	160762

MERIT RATING BOARD FREQUENCIES

CREDIT ELIGIBLE

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	3.96	6.60	6.78	.00	10.20	3.96	4.32
2	3.96	7.30	7.80	.00	11.28	3.96	4.46
3	4.07	7.45	7.85	.00	11.69	4.07	4.67
4	4.27	7.09	7.43	.00	11.77	4.27	4.82
5	4.20	7.43	7.23	.00	11.14	4.20	4.67
6	4.59	7.49	7.17	.00	11.26	4.59	5.06
7	4.84	7.85	8.15	.00	13.02	4.84	5.35
8	4.72	9.38	7.26	.00	13.17	4.72	5.36
9	5.00	8.23	8.72	.00	12.76	5.00	5.53
10	4.83	9.33	10.13	.00	13.65	4.83	5.48
11	5.55	8.90	8.66	.00	11.85	5.55	6.01
12	5.61	8.90	8.98	.00	14.01	5.61	6.11
13	5.70	10.36	9.53	.00	15.37	5.70	6.27
14	5.33	11.28	12.35	.00	17.54	5.33	6.17
15	5.76	11.28	10.66	.00	11.32	5.76	6.30
16	5.55	10.66	9.32	.00	13.39	5.55	6.12
17	4.99	10.13	10.49	.00	11.90	4.99	5.59
18	5.30	10.91	7.98	.00	9.89	5.30	5.83
19	5.85	7.49	9.46	.00	11.24	5.85	6.04
20	5.61	8.95	10.37	.00	15.12	5.61	6.13
21	7.23	13.37	8.13	.00	9.19	7.23	7.61
22	8.33	10.92	11.90	.00	13.33	8.33	8.52
23	4.91	10.53	8.40	.00	10.48	4.91	5.33
24	6.19	9.09	9.77	.00	8.78	6.19	6.49
25	5.87	10.34	15.22	.00	11.22	5.87	6.45
26	5.97	10.03	10.29	.00	11.60	5.97	6.40
CLASS AVG.	4.84	8.40	8.16	1.00	12.37	1.00	5.36

MERIT RATING BOARD FREQUENCIES

NO SURCHARGE; NO CREDIT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	5.62	6.64	8.45	10.94	9.94	5.62	7.08
2	5.61	8.85	7.65	12.45	13.32	5.61	7.68
3	5.58	8.26	9.94	12.87	12.93	5.58	7.93
4	6.20	9.99	8.81	13.59	12.84	6.20	8.42
5	5.83	9.41	9.04	14.15	14.52	5.83	8.47
6	6.28	10.04	8.57	15.48	13.85	6.28	8.97
7	6.83	10.31	9.29	15.20	16.01	6.83	9.27
8	6.53	11.31	9.93	15.86	15.83	6.53	9.53
9	6.76	9.87	8.87	17.28	13.55	6.76	9.72
10	6.67	13.10	9.41	18.31	14.04	6.67	9.80
11	7.95	10.95	8.96	16.98	15.72	7.95	10.52
12	8.12	10.95	10.92	17.71	18.21	8.12	10.51
13	7.76	12.15	9.03	18.85	17.12	7.76	10.51
14	7.59	13.20	10.92	17.08	13.87	7.59	9.89
15	8.53	12.50	12.63	20.23	19.09	8.53	11.28
16	8.34	12.64	8.49	17.89	17.31	8.34	10.60
17	7.10	9.71	15.79	13.27	17.95	7.10	8.96
18	6.33	12.17	7.58	15.38	9.62	6.33	8.21
19	7.73	7.35	9.09	16.55	7.41	7.73	8.68
20	7.32	10.92	16.00	20.00	11.43	7.32	9.70
21	8.90	14.54	11.29	15.37	14.44	8.90	10.11
22	9.51	8.82	.00	14.61	22.22	9.51	9.98
23	8.11	10.39	20.45	12.76	15.63	8.11	9.08
24	6.93	9.73	7.02	16.59	14.04	6.93	8.44
25	6.54	12.77	11.76	14.69	5.88	6.54	8.60
26	8.29	14.58	4.00	14.17	15.63	8.29	9.92
CLASS AVG.	6.74	10.35	9.38	15.38	14.62	1.00	9.20

MERIT RATING BOARD FREQUENCIES

'1' SAFE DRIVER POINT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	5.41	8.64	7.64	11.83	12.55	5.41	6.53
2	5.80	11.26	7.94	12.77	12.87	5.80	7.24
3	6.26	10.68	9.98	12.02	11.99	6.26	7.67
4	6.34	10.14	8.44	14.25	11.79	6.34	7.66
5	6.86	10.89	9.75	15.85	13.01	6.86	8.25
6	6.73	11.15	10.50	13.79	15.37	6.73	8.38
7	7.57	11.52	11.04	14.40	14.81	7.57	8.89
8	7.54	12.15	12.47	15.25	16.35	7.54	9.33
9	7.58	10.74	12.09	15.19	18.22	7.58	9.14
10	7.64	14.73	11.07	16.88	14.32	7.64	9.32
11	8.80	13.83	11.70	16.95	17.36	8.80	10.30
12	8.97	13.96	11.17	16.02	13.39	8.97	9.99
13	9.28	11.36	12.96	15.79	17.96	9.28	10.30
14	7.34	15.29	6.19	19.67	14.13	7.34	8.84
15	8.79	12.64	9.86	13.95	14.89	8.79	9.71
16	9.79	12.78	12.33	19.70	18.35	9.79	11.15
17	6.83	17.81	2.94	8.00	14.29	6.83	8.14
18	9.19	8.47	15.15	20.69	12.82	9.19	9.99
19	9.62	18.42	5.00	.00	27.27	9.62	10.34
20	9.08	21.25	12.50	7.14	7.32	9.08	10.24
21	10.35	18.63	8.54	17.39	15.79	10.35	11.09
22	12.59	4.00	20.00	.00	20.00	12.59	12.26
23	9.00	11.11	3.57	6.67	12.50	9.00	9.01
24	9.63	16.67	19.44	16.00	13.51	9.63	10.85
25	7.12	10.87	5.26	14.29	13.33	7.12	7.85
26	8.71	10.29	12.12	25.00	10.26	8.71	9.59
CLASS AVG.	7.55	11.83	10.59	14.74	14.41	1.00	8.88

MERIT RATING BOARD FREQUENCIES

'2' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	6.05	9.62	11.76	11.03	11.64	6.05	7.19
2	6.35	11.30	9.63	22.56	16.67	6.35	8.86
3	6.41	11.54	9.51	14.43	12.83	6.41	8.19
4	7.58	12.78	10.02	14.43	15.84	7.58	9.40
5	7.21	10.55	8.43	18.03	14.81	7.21	8.92
6	7.37	11.80	9.30	16.89	12.47	7.37	8.93
7	8.08	10.47	10.36	18.42	17.02	8.08	9.71
8	7.98	13.19	15.46	18.15	15.95	7.98	10.20
9	8.57	12.19	10.13	16.53	15.48	8.57	9.99
10	7.89	14.32	15.46	14.72	16.96	7.89	9.99
11	8.98	12.81	10.96	19.84	16.67	8.98	10.59
12	9.70	14.47	10.71	16.25	16.84	9.70	10.91
13	8.09	15.66	12.68	21.49	11.04	8.09	9.78
14	8.81	16.35	5.66	24.00	14.10	8.81	10.37
15	8.82	23.78	11.86	18.84	30.56	8.82	12.23
16	7.47	23.81	13.79	22.41	13.39	7.47	10.50
17	8.33	18.18	3.23	27.78	15.56	8.33	10.00
18	8.87	16.36	7.41	50.00	29.03	8.87	11.68
19	9.70	16.67	33.33	55.56	40.74	9.70	13.21
20	8.32	8.16	8.57	9.09	11.11	8.32	8.52
21	11.58	15.45	7.27	22.86	7.27	11.58	11.79
22	12.94	16.67	.00	33.33	.00	12.94	12.94
23	8.40	16.13	20.00	.00	27.27	8.40	9.44
24	10.87	18.00	9.09	31.25	16.67	10.87	12.03
25	5.78	12.50	.00	22.22	30.77	5.78	7.94
26	13.60	24.32	16.13	30.43	37.84	13.60	17.10
CLASS AVG.	8.04	12.78	10.84	17.60	15.39	1.00	9.73

MERIT RATING BOARD FREQUENCIES

'3' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	10.22	12.00	.00	28.57	20.00	10.22	12.20
2	8.46	10.64	20.00	14.29	8.33	8.46	9.91
3	9.22	15.20	13.51	21.94	23.33	9.22	13.05
4	10.14	12.47	17.32	15.53	18.44	10.14	12.22
5	8.88	14.92	17.76	18.02	17.01	8.88	11.82
6	8.87	16.44	17.59	21.74	17.10	8.87	12.38
7	10.09	14.91	12.90	22.61	19.31	10.09	12.67
8	8.88	16.02	17.43	18.14	21.67	8.88	12.44
9	13.19	16.92	9.43	18.33	12.00	13.19	14.09
10	13.75	21.95	19.05	20.00	13.85	13.75	15.67
11	13.53	19.07	9.68	21.36	23.86	13.53	15.61
12	13.53	17.54	19.42	19.13	17.09	13.53	14.89
13	14.42	16.84	16.00	21.88	18.18	14.42	15.53
14	13.21	11.76	20.00	20.00	15.38	13.21	13.98
15	16.59	12.82	.00	26.67	33.33	16.59	16.55
16	16.56	10.81	20.00	41.18	50.00	16.56	19.57
17	10.11	9.52	14.29	.00	.00	10.11	9.37
18	16.67	14.29	.00	.00	14.29	16.67	14.53
19	9.89	33.33	.00	20.00	.00	9.89	12.15
20	14.56	9.52	20.00	20.00	22.22	14.56	14.68
21	21.50	20.00	27.27	57.14	.00	21.50	21.57
22	15.71	.00	.00	100.00	.00	15.71	15.66
23	9.57	30.00	.00	.00	.00	9.57	10.37
24	15.04	30.77	33.33	8.33	14.29	15.04	16.55
25	13.95	53.85	33.33	50.00	.00	13.95	23.81
26	13.89	18.18	.00	33.33	.00	13.89	14.14
CLASS AVG.	11.26	15.88	15.43	20.09	18.38	1.00	13.43

MERIT RATING BOARD FREQUENCIES

'4' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	7.52	17.46	5.88	6.45	17.14	7.52	9.06
2	9.47	5.83	6.25	19.23	14.81	9.47	9.90
3	9.69	13.89	6.49	16.41	12.40	9.69	10.79
4	10.45	15.34	10.71	11.49	16.84	10.45	11.77
5	9.97	15.01	12.87	20.00	19.59	9.97	11.96
6	8.96	16.37	18.60	21.26	21.43	8.96	12.15
7	9.95	15.22	15.25	26.75	21.53	9.95	12.62
8	10.61	13.71	8.11	18.08	14.81	10.61	11.74
9	9.87	18.23	8.16	15.15	22.47	9.87	12.16
10	11.72	17.89	12.20	19.05	13.73	11.72	13.20
11	12.90	20.00	11.24	32.05	27.06	12.90	15.29
12	12.67	16.38	17.78	30.61	20.39	12.67	14.52
13	11.52	18.59	16.92	23.38	19.67	11.52	13.52
14	12.55	27.27	18.75	28.57	20.00	12.55	15.23
15	13.99	26.32	37.50	33.33	.00	13.99	17.16
16	14.10	15.38	14.29	15.38	.00	14.10	13.52
17	8.24	30.00	.00	.00	.00	8.24	8.78
18	13.79	7.69	.00	33.33	.00	13.79	12.39
19	8.60	20.00	.00	.00	.00	8.60	9.00
20	6.52	50.00	.00	.00	.00	6.52	9.92
21	16.49	25.00	20.00	16.67	27.27	16.49	17.63
22	12.12	.00	.00	.00	.00	12.12	11.27
23	16.49	16.67	.00	66.67	.00	16.49	17.11
24	12.96	6.25	25.00	100.00	100.00	12.96	14.50
25	9.09	25.00	.00	33.33	100.00	9.09	14.49
26	12.50	8.33	.00	60.00	.00	12.50	12.84
CLASS AVG.	10.74	16.05	12.58	20.87	18.30	1.00	12.58

MERIT RATING BOARD FREQUENCIES

'5' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	14.66	23.53	.00	33.33	.00	14.66	16.86
2	12.32	21.95	8.33	11.54	4.17	12.32	12.86
3	10.42	12.71	26.09	14.06	23.68	10.42	12.91
4	11.06	14.29	11.11	20.00	19.23	11.06	13.15
5	12.35	13.41	9.52	24.66	24.32	12.35	14.03
6	14.39	14.20	25.00	34.15	20.75	14.39	17.41
7	12.24	18.55	15.52	20.00	21.62	12.24	14.76
8	13.27	18.48	16.67	28.57	11.11	13.27	16.05
9	11.76	20.00	5.00	20.83	52.17	11.76	16.08
10	22.99	18.87	8.33	33.33	13.33	22.99	21.82
11	13.97	25.69	22.73	23.91	16.67	13.97	17.82
12	18.16	26.55	10.26	20.00	25.00	18.16	19.62
13	16.36	19.39	26.09	20.00	14.29	16.36	17.54
14	17.65	26.32	50.00	25.00	14.29	17.65	21.35
15	6.56	27.27	50.00	14.29	20.00	6.56	13.40
16	24.29	57.14	.00	50.00	33.33	24.29	30.61
17	22.22	16.67	.00	50.00	.00	22.22	17.78
18	20.00	9.09	.00	150.00	.00	20.00	21.15
19	11.11	20.00	.00	.00	.00	11.11	11.76
20	7.69	50.00	.00	.00	100.00	7.69	20.51
21	24.39	.00	.00	.00	.00	24.39	20.62
22	.00	.00	.00	.00	.00	.00	.00
23	22.73	.00	50.00	.00	.00	22.73	22.22
24	12.50	.00	.00	100.00	.00	12.50	16.00
25	7.69	66.67	100.00	.00	.00	7.69	22.22
26	39.13	.00	.00	.00	.00	39.13	26.47
CLASS AVG.	14.05	18.42	15.74	23.87	19.96	1.00	16.21

MERIT RATING BOARD FREQUENCIES

'6' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	13.79	28.57	.00	23.08	.00	13.79	16.50
2	9.64	18.52	50.00	29.41	23.08	9.64	15.97
3	8.99	13.64	11.76	35.71	18.18	8.99	13.04
4	13.33	16.36	14.29	25.00	23.53	13.33	15.70
5	10.30	16.50	23.81	22.64	20.83	10.30	13.74
6	15.49	19.83	9.09	18.52	16.67	15.49	16.63
7	11.76	16.95	21.21	21.13	17.86	11.76	14.40
8	11.82	16.28	22.22	23.33	20.00	11.82	14.97
9	10.81	12.90	7.69	4.55	23.53	10.81	11.37
10	12.12	14.71	25.00	25.00	20.00	12.12	14.56
11	15.14	18.18	20.83	51.85	46.15	15.14	20.12
12	15.59	23.08	16.00	41.38	7.14	15.59	18.50
13	14.85	14.29	7.69	25.00	25.00	14.85	15.55
14	10.87	18.18	.00	.00	40.00	10.87	13.24
15	25.49	7.69	.00	75.00	.00	25.49	22.97
16	15.91	.00	.00	20.00	.00	15.91	12.31
17	5.26	20.00	.00	.00	.00	5.26	7.41
18	20.00	60.00	.00	100.00	.00	20.00	27.59
19	7.69	.00	.00	.00	.00	7.69	5.88
20	19.05	50.00	.00	.00	.00	19.05	21.43
21	21.62	14.29	66.67	.00	50.00	21.62	22.99
22	7.69	100.00	.00	.00	.00	7.69	14.28
23	12.50	.00	.00	.00	.00	12.50	11.11
24	14.29	50.00	.00	.00	.00	14.29	17.24
25	30.00	.00	.00	.00	.00	30.00	20.00
26	19.05	14.29	.00	200.00	.00	19.05	21.21
CLASS AVG.	13.19	17.43	16.86	25.88	19.48	1.00	15.62

MERIT RATING BOARD FREQUENCIES

'7' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	14.29	9.09	.00	.00	.00	14.29	11.77
2	22.86	16.00	.00	33.33	.00	22.86	20.27
3	14.29	9.76	.00	19.05	25.00	14.29	13.80
4	22.02	9.62	30.00	16.67	46.15	22.02	20.19
5	18.92	13.56	36.36	42.11	15.38	18.92	20.19
6	16.48	19.35	38.46	20.00	.00	16.48	18.09
7	15.82	12.94	.00	21.21	6.67	15.82	14.46
8	13.33	26.47	33.33	24.39	31.25	13.33	20.47
9	17.91	37.84	33.33	28.57	.00	17.91	24.80
10	10.00	12.50	.00	22.22	66.67	10.00	15.25
11	21.74	18.75	44.44	33.33	33.33	21.74	24.00
12	22.22	13.89	.00	55.56	60.00	22.22	23.08
13	13.51	23.08	.00	.00	75.00	13.51	15.57
14	12.50	.00	.00	.00	100.00	12.50	10.34
15	19.05	80.00	.00	.00	.00	19.05	27.59
16	27.27	37.50	.00	.00	.00	27.27	24.00
17	.00	50.00	100.00	.00	100.00	.00	23.53
18	14.29	.00	.00	100.00	.00	14.29	18.18
19	.00	.00	.00	.00	.00	.00	.00
20	12.50	.00	.00	.00	.00	12.50	7.69
21	27.27	20.00	.00	.00	.00	27.27	23.81
22	.00	.00	.00	.00	.00	.00	.00
23	16.67	.00	.00	.00	.00	16.67	14.29
24	14.29	200.00	.00	.00	.00	14.29	30.00
25	.00	.00	.00	.00	.00	.00	.00
26	25.00	100.00	.00	.00	.00	25.00	28.57
CLASS AVG.	17.34	18.34	22.10	23.48	25.45	1.00	18.87

MERIT RATING BOARD FREQUENCIES

'8' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	7.41	.00	.00	.00	20.00	7.41	6.38
2	5.71	11.76	.00	.00	75.00	5.71	10.93
3	11.49	28.21	14.29	20.00	.00	11.49	15.48
4	11.85	16.67	37.50	20.00	.00	11.85	14.16
5	12.90	22.03	7.14	38.89	15.38	12.90	17.10
6	15.04	14.55	12.50	35.00	33.33	15.04	17.33
7	12.38	19.28	75.00	36.36	42.86	12.38	19.06
8	10.64	17.31	.00	16.67	33.33	10.64	13.54
9	22.73	12.50	.00	.00	66.67	22.73	20.59
10	13.33	.00	.00	37.50	.00	13.33	12.28
11	23.17	13.95	.00	42.86	40.00	23.17	21.57
12	13.21	19.35	.00	33.33	.00	13.21	14.74
13	15.91	23.81	33.33	28.57	37.50	15.91	20.00
14	11.76	28.57	.00	50.00	.00	11.76	18.52
15	15.79	100.00	.00	50.00	.00	15.79	37.93
16	10.00	28.57	.00	100.00	.00	10.00	20.69
17	.00	.00	.00	200.00	.00	.00	57.14
18	.00	.00	.00	.00	.00	.00	.00
19	50.00	.00	.00	.00	.00	50.00	42.86
20	25.00	25.00	.00	.00	.00	25.00	20.00
21	13.33	.00	.00	.00	.00	13.33	11.11
22	.00	.00	.00	.00	.00	.00	.00
23	57.14	.00	.00	.00	.00	57.14	50.00
24	.00	.00	.00	.00	.00	.00	.00
25	25.00	.00	.00	.00	.00	25.00	16.67
26	25.00	25.00	100.00	.00	.00	25.00	27.27
CLASS AVG.	13.87	18.95	18.00	31.10	26.92	1.00	17.09

MERIT RATING BOARD FREQUENCIES

'OVER 8' SAFE DRIVER PTS.

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	22.22	18.18	100.00	60.00	.00	22.22	28.20
2	10.81	23.53	.00	.00	50.00	10.81	14.44
3	28.24	10.45	13.33	30.00	.00	28.24	19.63
4	13.49	28.42	5.88	12.50	12.50	13.49	17.69
5	24.24	25.58	16.67	34.48	25.00	24.24	25.09
6	31.97	18.39	10.53	34.38	42.86	31.97	27.01
7	20.35	20.93	15.00	47.62	14.29	20.35	22.58
8	13.69	20.19	9.52	14.71	33.33	13.69	16.22
9	24.39	30.91	11.11	29.41	.00	24.39	25.15
10	30.23	35.14	25.00	.00	75.00	30.23	32.26
11	26.25	49.02	33.33	7.14	14.29	26.25	31.68
12	38.46	32.14	20.00	41.67	42.86	38.46	35.57
13	27.17	22.86	27.27	112.50	25.00	27.17	30.66
14	20.00	33.33	.00	100.00	.00	20.00	27.78
15	21.74	50.00	.00	100.00	.00	21.74	39.13
16	22.22	14.29	.00	.00	.00	22.22	15.79
17	44.44	.00	.00	50.00	.00	44.44	37.50
18	50.00	25.00	.00	.00	.00	50.00	39.13
19	16.67	.00	.00	.00	.00	16.67	10.00
20	50.00	20.00	.00	.00	100.00	50.00	42.86
21	47.62	50.00	.00	100.00	.00	47.62	48.28
22	66.67	200.00	.00	.00	.00	66.67	100.00
23	12.50	.00	.00	.00	.00	12.50	10.00
24	33.33	.00	.00	50.00	.00	33.33	21.43
25	66.67	.00	.00	.00	.00	66.67	66.67
26	37.50	80.00	.00	.00	.00	37.50	41.18
CLASS AVG.	24.42	25.60	15.00	32.08	20.00	1.00	24.76

MERIT RATING BOARD FREQUENCIES

TOTAL FOR ALL CATEGORIES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	4.39	7.53	7.49	11.48	10.64	4.39	5.12
2	4.52	8.77	8.24	13.44	12.44	4.52	5.61
3	4.62	8.75	8.87	13.34	12.30	4.62	5.80
4	4.96	8.97	8.42	13.85	12.66	4.96	6.11
5	4.85	9.05	8.48	15.01	12.63	4.85	6.00
6	5.22	9.48	8.66	15.98	12.71	5.22	6.44
7	5.57	9.58	9.38	15.95	14.49	5.57	6.73
8	5.45	10.99	9.63	16.24	14.61	5.45	6.89
9	5.76	10.01	9.28	17.05	14.24	5.76	7.04
10	5.61	11.81	10.81	18.15	14.29	5.61	6.98
11	6.47	11.14	9.67	17.79	14.34	6.47	7.68
12	6.53	10.83	10.17	17.93	15.14	6.53	7.57
13	6.49	11.68	10.54	19.12	15.72	6.49	7.64
14	6.15	13.17	11.08	18.42	16.40	6.15	7.50
15	6.76	14.15	11.22	20.62	15.24	6.76	8.09
16	6.59	13.06	10.15	19.35	15.11	6.59	7.83
17	5.68	11.98	10.00	15.69	13.22	5.68	6.72
18	6.31	11.70	8.20	18.77	11.91	6.31	7.28
19	6.67	9.48	9.92	17.54	17.26	6.67	7.23
20	6.43	12.12	11.24	17.14	14.01	6.43	7.45
21	8.30	14.49	9.51	16.28	10.75	8.30	8.89
22	9.14	11.29	9.46	16.33	13.73	9.14	9.39
23	5.83	10.93	11.06	12.44	12.36	5.83	6.36
24	6.89	10.81	10.96	18.35	11.74	6.89	7.56
25	6.21	12.78	13.57	15.66	13.51	6.21	7.27
26	7.07	12.58	9.63	17.63	14.54	7.07	8.05
CLASS AVG.	5.57	10.13	9.30	15.90	13.61	1.00	6.73

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

CLASS TERRITORY	CREDIT ELIGIBLE 10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	3.96	6.60	6.78	.00	10.20	3.96	4.25
2	3.96	7.30	7.80	.00	11.28	3.96	4.43
3	4.07	7.45	7.85	.00	11.69	4.07	4.62
4	4.27	7.09	7.43	.00	11.77	4.27	4.78
5	4.20	7.43	7.23	.00	11.14	4.20	4.59
6	4.59	7.49	7.17	.00	11.26	4.59	4.97
7	4.84	7.85	8.15	.00	13.02	4.84	5.28
8	4.72	9.38	7.26	.00	13.17	4.72	5.29
9	5.00	8.23	8.72	.00	12.76	5.00	5.41
10	4.83	9.33	10.13	.00	13.65	4.83	5.47
11	5.55	8.90	8.66	.00	11.85	5.55	5.88
12	5.61	8.90	8.98	.00	14.01	5.61	6.03
13	5.70	10.36	9.53	.00	15.37	5.70	6.20
14	5.33	11.28	12.35	.00	17.54	5.33	6.20
15	5.76	11.28	10.66	.00	11.32	5.76	6.23
16	5.55	10.66	9.32	.00	13.39	5.55	6.11
17	4.99	10.13	10.49	.00	11.90	4.99	5.62
18	5.30	10.91	7.98	.00	9.89	5.30	5.77
19	5.85	7.49	9.46	.00	11.24	5.85	5.97
20	5.61	8.95	10.37	.00	15.12	5.61	6.09
21	7.23	13.37	8.13	.00	9.19	7.23	7.47
22	8.33	10.92	11.90	.00	13.33	8.33	8.41
23	4.91	10.53	8.40	.00	10.48	4.91	5.27
24	6.19	9.09	9.77	.00	8.78	6.19	6.40
25	5.87	10.34	15.22	.00	11.22	5.87	6.36
26	5.97	10.03	10.29	.00	11.60	5.97	6.33
CLASS AVG.	4.84	8.38	8.15	.00	12.37	1.00	

Average Excluding
Class 20-25 = 5.51

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

NO SURCHARGE; NO CREDIT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	5.62	6.64	8.45	10.94	9.94	5.62	6.09
2	5.61	8.85	7.65	12.45	13.32	5.61	6.50
3	5.58	8.26	9.94	12.87	12.93	5.58	6.59
4	6.20	9.99	8.81	13.59	12.84	6.20	7.19
5	5.83	9.41	9.04	14.15	14.52	5.83	6.89
6	6.28	10.04	8.57	15.48	13.85	6.28	7.37
7	6.83	10.31	9.29	15.20	16.01	6.83	7.85
8	6.53	11.31	9.93	15.86	15.83	6.53	7.84
9	6.76	9.87	8.87	17.28	13.55	6.76	7.81
10	6.67	13.10	9.41	18.31	14.04	6.67	7.90
11	7.95	10.95	8.96	16.98	15.72	7.95	8.88
12	8.12	10.95	10.92	17.71	18.21	8.12	9.04
13	7.76	12.15	9.03	18.85	17.12	7.76	8.74
14	7.59	13.20	10.92	17.08	13.87	7.59	8.57
15	8.53	12.50	12.63	20.23	19.09	8.53	9.60
16	8.34	12.64	8.49	17.89	17.31	8.34	9.27
17	7.10	9.71	15.79	13.27	17.95	7.10	8.09
18	6.33	12.17	7.58	15.38	9.62	6.33	7.14
19	7.73	7.35	9.09	16.55	7.41	7.73	7.88
20	7.32	10.92	16.00	20.00	11.43	7.32	8.25
21	8.90	14.54	11.29	15.37	14.44	8.90	9.51
22	9.51	8.82	.00	14.61	22.22	9.51	9.54
23	8.11	10.39	20.45	12.76	15.63	8.11	8.57
24	6.93	9.73	7.02	16.59	14.04	6.93	7.45
25	6.54	12.77	11.76	14.69	5.88	6.54	7.29
26	8.29	14.58	4.00	14.17	15.63	8.29	8.98
CLASS AVG.	6.76	10.41	9.40	15.38	14.68	1.00	7.75

Average Excluding
Class 20-25 = 7.43

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'1' SAFE DRIVER POINT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	5.41	8.64	7.64	11.83	12.55	5.41	6.14
2	5.80	11.26	7.94	12.77	12.87	5.80	6.80
3	6.26	10.68	9.98	12.02	11.99	6.26	7.21
4	6.34	10.14	8.44	14.25	11.79	6.34	7.28
5	6.86	10.89	9.75	15.85	13.01	6.86	7.86
6	6.73	11.15	10.50	13.79	15.37	6.73	7.86
7	7.57	11.52	11.04	14.40	14.81	7.57	8.50
8	7.54	12.15	12.47	15.25	16.35	7.54	8.77
9	7.58	10.74	12.09	15.19	18.22	7.58	8.72
10	7.64	14.73	11.07	16.88	14.32	7.64	8.82
11	8.80	13.83	11.70	16.95	17.36	8.80	9.92
12	8.97	13.96	11.17	16.02	13.39	8.97	9.73
13	9.28	11.36	12.96	15.79	17.96	9.28	9.99
14	7.34	15.29	6.19	19.67	14.13	7.34	8.45
15	8.79	12.64	9.86	13.95	14.89	8.79	9.44
16	9.79	12.78	12.33	19.70	18.35	9.79	10.69
17	6.83	17.81	2.94	8.00	14.29	6.83	7.71
18	9.19	8.47	15.15	20.69	12.82	9.19	9.77
19	9.62	18.42	5.00	.00	27.27	9.62	10.14
20	9.08	21.25	12.50	7.14	7.32	9.08	9.88
21	10.35	18.63	8.54	17.39	15.79	10.35	11.04
22	12.59	4.00	20.00	.00	20.00	12.59	12.12
23	9.00	11.11	3.57	6.67	12.50	9.00	9.05
24	9.63	16.67	19.44	16.00	13.51	9.63	10.53
25	7.12	10.87	5.26	14.29	13.33	7.12	7.68
26	8.71	10.29	12.12	25.00	10.26	8.71	9.46
CLASS AVG.	7.53	11.84	10.59	14.77	14.38	1.00	8.47

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'2' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	6.05	9.62	11.76	11.03	11.64	6.05	6.76
2	6.35	11.30	9.63	22.56	16.67	6.35	7.88
3	6.41	11.54	9.51	14.43	12.83	6.41	7.53
4	7.58	12.78	10.02	14.43	15.84	7.58	8.73
5	7.21	10.55	8.43	18.03	14.81	7.21	8.27
6	7.37	11.80	9.30	16.89	12.47	7.37	8.39
7	8.08	10.47	10.36	18.42	17.02	8.08	9.10
8	7.98	13.19	15.46	18.15	15.95	7.98	9.40
9	8.57	12.19	10.13	16.53	15.48	8.57	9.53
10	7.89	14.32	15.46	14.72	16.96	7.89	9.15
11	8.98	12.81	10.96	19.84	16.67	8.98	10.07
12	9.70	14.47	10.71	16.25	16.84	9.70	10.49
13	8.09	15.66	12.68	21.49	11.04	8.09	9.23
14	8.81	16.35	5.66	24.00	14.10	8.81	9.87
15	8.82	23.78	11.86	18.84	30.56	8.82	10.91
16	7.47	23.81	13.79	22.41	13.39	7.47	9.42
17	8.33	18.18	3.23	27.78	15.56	8.33	9.53
18	8.87	16.36	7.41	50.00	29.03	8.87	11.17
19	9.70	16.67	33.33	55.56	40.74	9.70	11.72
20	8.32	8.16	8.57	9.09	11.11	8.32	8.42
21	11.58	15.45	7.27	22.86	7.27	11.58	11.88
22	12.94	16.67	.00	33.33	.00	12.94	13.18
23	8.40	16.13	20.00	.00	27.27	8.40	9.10
24	10.37	18.00	9.09	31.25	16.67	10.87	11.84
25	5.78	12.50	.00	22.22	30.77	5.78	7.17
26	13.60	24.32	16.13	30.43	37.84	13.60	15.65
CLASS AVG.	7.98	12.76	10.80	17.61	15.32	1.00	9.07

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'3' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	10.22	12.00	.00	28.57	20.00	10.22	11.15
2	8.46	10.64	20.00	14.29	8.33	8.46	9.11
3	9.22	15.20	13.51	21.94	23.33	9.22	11.05
4	10.14	12.47	17.32	15.53	18.44	10.14	11.17
5	8.88	14.92	17.76	18.02	17.01	8.88	10.25
6	8.87	16.44	17.59	21.74	17.10	8.87	10.58
7	10.09	14.91	12.90	22.61	19.31	10.09	11.38
8	8.88	16.02	17.43	18.14	21.67	8.88	10.65
9	13.19	16.92	9.43	18.33	12.00	13.19	13.57
10	13.75	21.95	19.05	20.00	13.85	13.75	14.67
11	13.53	19.07	9.68	21.36	23.86	13.53	14.56
12	13.53	17.54	19.42	19.13	17.09	13.53	14.24
13	14.42	16.84	16.00	21.88	18.18	14.42	14.98
14	13.21	11.76	20.00	20.00	15.38	13.21	13.60
15	16.59	12.82	.00	26.67	33.33	16.59	16.78
16	16.56	10.81	20.00	41.18	50.00	16.56	18.29
17	10.11	9.52	14.29	.00	.00	10.11	9.53
18	16.67	14.29	.00	.00	14.29	16.67	15.43
19	9.89	33.33	.00	20.00	.00	9.89	10.96
20	14.56	9.52	20.00	20.00	22.22	14.56	14.73
21	21.50	20.00	27.27	57.14	.00	21.50	21.91
22	15.71	.00	.00	100.00	.00	15.71	15.91
23	9.57	30.00	.00	.00	.00	9.57	10.35
24	15.04	30.77	33.33	8.33	14.29	15.04	16.39
25	13.95	53.85	33.33	50.00	.00	13.95	17.75
26	13.89	18.18	.00	33.33	.00	13.89	13.91
CLASS AVG.	11.10	15.92	15.39	20.34	18.47	1.00	12.21

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'4' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	7.52	17.46	5.88	6.45	17.14	7.52	8.35
2	9.47	5.83	6.25	19.23	14.81	9.47	9.84
3	9.69	13.89	6.49	16.41	12.40	9.69	10.32
4	10.45	15.34	10.71	11.49	16.84	10.45	11.17
5	9.97	15.01	12.87	20.00	19.59	9.97	11.23
6	8.96	16.37	18.60	21.26	21.43	8.96	10.86
7	9.95	15.22	15.25	26.75	21.53	9.95	11.61
8	10.61	13.71	8.11	18.08	14.81	10.61	11.32
9	9.87	18.23	8.16	15.15	22.47	9.87	11.21
10	11.72	17.89	12.20	19.05	13.73	11.72	12.50
11	12.90	20.00	11.24	32.05	27.06	12.90	14.73
12	12.67	16.38	17.78	30.61	20.39	12.67	13.88
13	11.52	18.59	16.92	23.38	19.67	11.52	12.76
14	12.55	27.27	18.75	28.57	20.00	12.55	14.45
15	13.99	26.32	37.50	33.33	.00	13.99	15.63
16	14.10	15.38	14.29	15.38	.00	14.10	13.70
17	8.24	30.00	.00	.00	.00	8.24	8.76
18	13.79	7.69	.00	33.33	.00	13.79	13.04
19	8.60	20.00	.00	.00	.00	8.60	8.77
20	6.52	50.00	.00	.00	.00	6.52	8.92
21	16.49	25.00	20.00	16.67	27.27	16.49	17.24
22	12.12	.00	.00	.00	.00	12.12	11.11
23	16.49	16.67	.00	66.67	.00	16.49	16.78
24	12.96	6.25	25.00	100.00	100.00	12.96	16.02
25	9.09	25.00	.00	33.33	100.00	9.09	12.86
26	12.50	8.33	.00	60.00	.00	12.50	12.98
CLASS AVG.	10.68	16.16	12.60	21.09	18.45	1.00	11.84

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'5' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	14.66	23.53	.00	33.33	.00	14.66	14.98
2	12.32	21.95	8.33	11.54	4.17	12.32	12.38
3	10.42	12.71	26.09	14.06	23.68	10.42	11.88
4	11.06	14.29	11.11	20.00	19.23	11.06	12.09
5	12.35	13.41	9.52	24.66	24.32	12.35	13.43
6	14.39	14.20	25.00	34.15	20.75	14.39	15.85
7	12.24	18.55	15.52	20.00	21.62	12.24	13.45
8	13.27	18.48	16.67	28.57	11.11	13.27	14.35
9	11.76	20.00	5.00	20.83	52.17	11.76	14.29
10	22.99	18.87	8.33	33.33	13.33	22.99	22.28
11	13.97	25.69	22.73	23.91	16.67	13.97	15.61
12	18.16	26.55	10.26	20.00	25.00	18.16	18.80
13	16.36	19.39	26.09	20.00	14.29	16.36	16.84
14	17.65	26.32	50.00	25.00	14.29	17.65	19.26
15	6.56	27.27	50.00	14.29	20.00	6.56	9.63
16	24.29	57.14	.00	50.00	33.33	24.29	27.02
17	22.22	16.67	.00	50.00	.00	22.22	21.00
18	20.00	9.09	.00	150.00	.00	20.00	21.65
19	11.11	20.00	.00	.00	.00	11.11	11.03
20	7.69	50.00	.00	.00	100.00	7.69	12.91
21	24.39	.00	.00	.00	.00	24.39	21.57
22	.00	.00	.00	.00	.00	.00	.00
23	22.73	.00	50.00	.00	.00	22.73	21.26
24	12.50	.00	.00	100.00	.00	12.50	12.76
25	7.69	66.67	100.00	.00	.00	7.69	13.43
26	39.13	.00	.00	.00	.00	39.13	33.19
CLASS AVG.	14.02	18.46	15.78	23.62	20.11	1.00	15.00

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'6' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	13.79	28.57	.00	23.08	.00	13.79	14.14
2	9.64	18.52	50.00	29.41	23.08	9.64	12.60
3	8.99	13.64	11.76	35.71	18.18	8.99	11.04
4	13.33	16.36	14.29	25.00	23.53	13.33	14.60
5	10.30	16.50	23.81	22.64	20.83	10.30	12.03
6	15.49	19.83	9.09	18.52	16.67	15.49	15.81
7	11.76	16.95	21.21	21.13	17.86	11.76	12.98
8	11.82	16.28	22.22	23.33	20.00	11.82	13.33
9	10.81	12.90	7.69	4.55	23.53	10.81	11.12
10	12.12	14.71	25.00	25.00	20.00	12.12	13.43
11	15.14	18.18	20.83	51.85	46.15	15.14	18.24
12	15.59	23.08	16.00	41.38	7.14	15.59	16.60
13	14.85	14.29	7.69	25.00	25.00	14.85	15.31
14	10.87	18.18	.00	.00	40.00	10.87	11.76
15	25.49	7.69	.00	75.00	.00	25.49	24.60
16	15.91	.00	.00	20.00	.00	15.91	13.96
17	5.26	20.00	.00	.00	.00	5.26	5.64
18	20.00	60.00	.00	100.00	.00	20.00	23.75
19	7.69	.00	.00	.00	.00	7.69	6.93
20	19.05	50.00	.00	.00	.00	19.05	19.57
21	21.62	14.29	66.67	.00	50.00	21.62	22.12
22	7.69	100.00	.00	.00	.00	7.69	11.93
23	12.50	.00	.00	.00	.00	12.50	11.29
24	14.29	50.00	.00	.00	.00	14.29	16.01
25	30.00	.00	.00	.00	.00	30.00	25.71
26	19.05	14.29	.00	200.00	.00	19.05	23.27
CLASS AVG.	12.99	17.51	16.66	26.21	19.57	1.00	14.20

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'7' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	14.29	9.09	.00	.00	.00	14.29	12.64
2	22.86	16.00	.00	33.33	.00	22.86	21.27
3	14.29	9.76	.00	19.05	25.00	14.29	14.42
4	22.02	9.62	30.00	16.67	46.15	22.02	22.51
5	18.92	13.56	36.36	42.11	15.38	18.92	19.88
6	16.48	19.35	38.46	20.00	.00	16.48	16.61
7	15.82	12.94	.00	21.21	6.67	15.82	15.06
8	13.33	26.47	33.33	24.39	31.25	13.33	16.14
9	17.91	37.84	33.33	28.57	.00	17.91	19.53
10	10.00	12.50	.00	22.22	66.67	10.00	12.71
11	21.74	18.75	44.44	33.33	33.33	21.74	23.05
12	22.22	13.89	.00	55.56	60.00	22.22	23.51
13	13.51	23.08	.00	.00	75.00	13.51	15.30
14	12.50	.00	.00	.00	100.00	12.50	14.14
15	19.05	80.00	.00	.00	.00	19.05	21.77
16	27.27	37.50	.00	.00	.00	27.27	25.38
17	.00	50.00	100.00	.00	100.00	.00	9.91
18	14.29	.00	.00	100.00	.00	14.29	14.82
19	.00	.00	.00	.00	.00	.00	.00
20	12.50	.00	.00	.00	.00	12.50	10.63
21	27.27	20.00	.00	.00	.00	27.27	25.24
22	.00	.00	.00	.00	.00	.00	.00
23	16.67	.00	.00	.00	.00	16.67	15.05
24	14.29	200.00	.00	.00	.00	14.29	26.70
25	.00	.00	.00	.00	.00	.00	.00
26	25.00	100.00	.00	.00	.00	25.00	27.18
CLASS AVG.	17.31	19.06	17.87	24.54	26.06	1.00	18.10

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'8' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	7.41	.00	.00	.00	20.00	7.41	7.05
2	5.71	11.76	.00	.00	75.00	5.71	8.93
3	11.49	28.21	14.29	20.00	.00	11.49	12.37
4	11.85	16.67	37.50	20.00	.00	11.85	12.59
5	12.90	22.03	7.14	38.89	15.38	12.90	14.64
6	15.04	14.55	12.50	35.00	33.33	15.04	16.72
7	12.38	19.28	75.00	36.36	42.86	12.38	16.70
8	10.64	17.31	.00	16.67	33.33	10.64	12.19
9	22.73	12.50	.00	.00	66.67	22.73	22.15
10	13.33	.00	.00	37.50	.00	13.33	12.38
11	23.17	13.95	.00	42.86	40.00	23.17	23.33
12	13.21	19.35	.00	33.33	.00	13.21	13.43
13	15.91	23.81	33.33	28.57	37.50	15.91	17.93
14	11.76	28.57	.00	50.00	.00	11.76	13.25
15	15.79	100.00	.00	50.00	.00	15.79	22.12
16	10.00	28.57	.00	100.00	.00	10.00	13.41
17	.00	.00	.00	200.00	.00	.00	4.70
18	.00	.00	.00	.00	.00	.00	.00
19	50.00	.00	.00	.00	.00	50.00	45.03
20	25.00	25.00	.00	.00	.00	25.00	22.94
21	13.33	.00	.00	.00	.00	13.33	11.79
22	.00	.00	.00	.00	.00	.00	.00
23	57.14	.00	.00	.00	.00	57.14	51.59
24	.00	.00	.00	.00	.00	.00	.00
25	25.00	.00	.00	.00	.00	25.00	21.42
26	25.00	25.00	100.00	.00	.00	25.00	25.40
CLASS AVG.	13.85	17.94	19.55	27.40	23.49	1.00	15.22

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

'OVER 8' SAFE DRIVER PTS.

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	22.22	18.18	100.00	60.00	.00	22.22	24.18
2	10.81	23.53	.00	.00	50.00	10.81	12.68
3	28.24	10.45	13.33	30.00	.00	28.24	25.24
4	13.49	28.42	5.88	12.50	12.50	13.49	14.17
5	24.24	25.58	16.67	34.48	25.00	24.24	24.64
6	31.97	18.39	10.53	34.38	42.86	31.97	31.13
7	20.35	20.93	15.00	47.62	14.29	20.35	21.10
8	13.69	20.19	9.52	14.71	33.33	13.69	15.02
9	24.39	30.91	11.11	29.41	.00	24.39	23.78
10	30.23	35.14	25.00	.00	75.00	30.23	31.21
11	26.25	49.02	33.33	7.14	14.29	26.25	26.88
12	38.46	32.14	20.00	41.67	42.86	38.46	37.84
13	27.17	22.86	27.27	112.50	25.00	27.17	29.70
14	20.00	33.33	.00	100.00	.00	20.00	22.00
15	21.74	50.00	.00	100.00	.00	21.74	25.27
16	22.22	14.29	.00	.00	.00	22.22	19.59
17	44.44	.00	.00	50.00	.00	44.44	38.85
18	50.00	25.00	.00	.00	.00	50.00	43.66
19	16.67	.00	.00	.00	.00	16.67	15.01
20	50.00	20.00	.00	.00	100.00	50.00	46.85
21	47.62	50.00	.00	100.00	.00	47.62	47.11
22	66.67	200.00	.00	.00	.00	66.67	70.90
23	12.50	.00	.00	.00	.00	12.50	11.29
24	33.33	.00	.00	50.00	.00	33.33	29.95
25	66.67	.00	.00	.00	.00	66.67	57.13
26	37.50	80.00	.00	.00	.00	37.50	36.58
CLASS AVG.	24.76	25.62	15.83	33.59	22.71	1.00	24.86

MERIT RATING BOARD FREQUENCIES WEIGHTED BY TOTAL EXPOSURES BY POINTS

TOTAL FOR ALL CATEGORIES

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY AVERAGE
1	4.39	7.53	7.49	11.48	10.64	4.39	5.12
2	4.52	8.77	8.24	13.44	12.44	4.52	5.61
3	4.62	8.75	8.87	13.34	12.30	4.62	5.80
4	4.96	8.97	8.42	13.85	12.66	4.96	6.11
5	4.85	9.05	8.48	15.01	12.63	4.85	6.00
6	5.22	9.48	8.66	15.98	12.71	5.22	6.44
7	5.57	9.58	9.38	15.95	14.49	5.57	6.73
8	5.45	10.99	9.63	16.24	14.61	5.45	6.89
9	5.76	10.01	9.28	17.05	14.24	5.76	7.04
10	5.61	11.81	10.81	18.15	14.29	5.61	6.98
11	6.47	11.14	9.67	17.79	14.34	6.47	7.68
12	6.53	10.83	10.17	17.93	15.14	6.53	7.57
13	6.49	11.68	10.54	19.12	15.72	6.49	7.64
14	6.15	13.17	11.08	18.42	16.40	6.15	7.50
15	6.76	14.15	11.22	20.62	15.24	6.76	8.09
16	6.59	13.06	10.15	19.35	15.11	6.59	7.83
17	5.68	11.98	10.00	15.69	13.22	5.68	6.72
18	6.31	11.70	8.20	18.77	11.91	6.31	7.28
19	6.67	9.48	9.92	17.54	17.26	6.67	7.23
20	6.43	12.12	11.24	17.14	14.01	6.43	7.45
21	8.30	14.49	9.51	16.28	10.75	8.30	8.89
22	9.14	11.29	9.46	16.33	13.73	9.14	9.39
23	5.83	10.93	11.06	12.44	12.36	5.83	6.36
24	6.89	10.81	10.96	18.35	11.74	6.89	7.56
25	6.21	12.78	13.57	15.66	13.51	6.21	7.27
26	7.07	12.58	9.63	17.63	14.54	7.07	8.05
CLASS AVG.	5.57	10.13	9.30	15.90	13.61	1.00	6.73

Average Excluding
Class 20-25 = 6.34

#1339

Exhibit 9

1984 Massachusetts Private Passenger Automobile
Estimated Total Market Exposures by Class-Territory - SDIP

Contents

Explanatory Memorandum

Exhibit 9A Estimated 1984 Total Market Exposures by Class-Territory - SDIP

Exhibit 9B Estimated 1984 Total Market Exposures by Class-Territory

Exhibit 9C Merit Rating Board exposures by class-territory - SDIP

1984 Massachusetts Private Passenger Automobile
Estimated Total Market Exposures by Class-Territory - SDIP
Explanatory Memorandum

The Massachusetts reform legislation (St. 1983, c. 241, §11) requires that the aggregate SDIP credit to safe drivers' premiums equal the increase in aggregate premiums to be charged to those not defined as safe drivers under the SDIP. This requirement clearly applies at least on a statewide basis, but checking the balance of the SDIP plan by class and territory may be of interest as well.

Performing these operations requires estimates of 1984 (PDL) exposures, broken down by the 3 dimensions: driver class, territory, and SDIP point. The basic sources of these exposures are:

- Statistical plan ratemaking data, which provide driver classification and territory detail, but no SDIP information. These statistical plan exposures are displayed in Exhibit 9B. The Exhibit 9B exposures are the same ones that will be used in calculating territory-class rating relativities; they have been adjusted for the final phasing in of Classes 17 and 18 and for the expected increase in listed inexperienced operators due to c. 241.

- Merit Rating Board data, which provide class, territory, and SDIP detail, but depend on proxy classification variables, and which reflect policy years rather than car-years of exposures. (The classification proxy is driver age; see Appendix C.) For purposes of estimating 1984 exposure distributions, the MARB, SRB, and AG have agreed to use the Merit Rating Board tabulation that reflects the "forgiveness" of surchargeable events where a surcharge already has been billed and paid under Merit Rating, since that "forgiveness" process will be used in 1984. The Merit Rating Board exposure data, including the effects of "forgiveness," are tabulated in Exhibit 9C.

The selected estimates of 1984 exposures by class-territory-SDIP are determined by applying (a) the MRB distribution of

exposures by point within each class-territory, to (b) the 1984 class-territory exposures from the Statistical Plan data.

The following steps are required:

1. Estimated 1984 PDL exposures by class (six-class basis) and territory (Exhibit 9B) are denoted $E'_{c,t}$.

2. The class-territory-SDIP point data, including the forgiveness of paid incidents, provided by the Merit Rating Board (Exhibit 9C) is manipulated as follows:

   a. Territory 00, Territory "Error", and the Class "Operator Date of Birth Not Given" data are eliminated.
   b. The "Operator 65 years and older" class is combined with the "All operators 23 years to 65 years" class.
   c. In the classes with all operators 16-19 years old, "credit-eligible" exposures are shifted to "no credit-no surcharge" status, since inexperienced (0-3 years) principal operators are not eligible for credits.

   These exposures are denoted $E''\hat{}_{c,t,s}$. The $\hat{c}$ indicates that the class variables are proxies for rating classifications.

3. Estimated exposures by class-territory-SDIP status are determined as follows:

$$E_{c,t,s} = E'_{c,t} \times (E''\hat{}_{c,t,s} \; / \; \sum_{s} E''\hat{}_{c,t,s})$$

   where the following class proxies are used for each ratemaking class:

Ratemaking Class	Merit Rating Board Proxy
10,10M,15,15M combined	All operators 23+ years (including operators 65+ years)
30	All operators 23+ years (including operators 65+ years)
17	All operators 20-22 years
18	Some operators 20-22, some 23+
20,25 combined	All operators 16-19
21,26 combined	Some operators 16-19, some 20+

The resulting exposures are displayed in Exhibit 9A.

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

CREDIT ELIGIBLE

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	54692.1	1342.5	445.0	.0	1143.5	975.8	58598.9
2	51046.9	1230.0	494.3	.0	1451.4	1017.2	55239.8
3	128769.3	3560.9	1364.4	.0	4343.4	2468.4	140506.4
4	171876.5	5144.8	2161.8	.0	6014.0	3967.3	189164.4
5	177955.8	5116.7	1576.0	.0	4663.8	3126.9	192439.2
6	155706.4	4653.0	1583.7	.0	4960.3	2891.2	169794.6
7	235763.7	6566.8	2280.5	.0	6765.0	4604.4	255980.4
8	157036.5	4826.9	1629.7	.0	4945.9	3155.1	171594.1
9	78905.8	2776.0	826.6	.0	2212.8	1321.2	86042.4
10	52801.4	1529.6	607.3	.0	1665.1	1168.2	57771.6
11	85960.5	3450.1	985.4	.0	2313.7	946.6	93656.3
12	148148.3	4281.0	1535.6	.0	3919.3	2590.5	160474.7
13	100519.6	3020.3	884.0	.0	2282.6	1529.7	108236.2
14	15405.3	392.4	138.7	.0	392.9	224.3	16553.6
15	16330.9	475.5	126.0	.0	349.7	228.7	17510.8
16	15472.2	411.4	167.8	.0	362.9	176.8	16591.1
17	7976.0	207.2	92.3	.0	259.3	168.6	8703.4
18	6474.1	232.7	75.3	.0	180.6	96.2	7058.9
19	6546.4	178.5	43.2	.0	91.1	148.8	7008.0
20	7001.3	216.6	76.9	.0	169.9	91.7	7556.4
21	20567.9	703.8	134.3	.0	392.2	272.9	22071.1
22	4235.5	110.6	15.4	.0	38.6	47.1	4447.2
23	10551.6	295.8	45.8	.0	113.4	388.0	11394.6
24	10085.1	346.7	89.0	.0	165.0	202.7	10888.5
25	4294.8	118.8	41.9	.0	91.7	57.0	4604.2
26	6935.6	183.4	79.8	.0	165.4	87.8	7452.0
CLASS TOT.	1731059.5	51372.0	17500.7	.0	49453.5	31953.1	1881338.8

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

NO SURCHARGE; NO CREDIT

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	10228.8	504.2	204.2	2601.2	487.3	182.5	14208.2
2	11740.1	609.3	267.0	2969.0	771.4	233.9	16590.7
3	28718.6	1711.0	751.2	8144.3	2017.1	550.5	41892.7
4	40725.2	2346.8	1254.1	10984.1	2977.7	940.0	59227.9
5	39349.8	2311.0	853.6	11572.0	2105.5	691.4	56883.3
6	36242.7	2292.7	900.8	10412.7	2281.4	673.0	52803.3
7	54823.3	3096.3	1339.9	15163.1	3048.0	1070.7	78541.3
8	37389.5	2436.1	989.0	11340.7	2339.0	751.2	55245.5
9	18580.7	1333.0	461.0	5916.3	974.6	311.1	27576.7
10	11397.9	680.0	343.0	3193.1	748.2	252.2	16614.4
11	19564.3	1630.0	536.5	7530.3	1082.2	215.4	30558.7
12	31237.4	1536.3	757.2	8315.7	1552.1	546.2	43944.9
13	20864.4	1128.2	455.3	6500.6	970.8	317.5	30236.8
14	3542.4	172.6	80.7	918.7	175.8	51.6	4941.8
15	3600.5	191.5	71.8	1169.7	149.1	50.4	5233.0
16	3548.5	188.7	88.5	971.1	195.3	40.5	5032.6
17	1686.3	81.2	45.6	395.0	111.1	35.7	2354.9
18	1643.4	90.4	43.0	435.4	76.4	24.4	2313.0
19	1446.3	48.1	17.5	354.3	37.9	32.9	1937.0
20	1718.8	89.8	41.6	433.9	65.2	22.5	2371.8
21	5232.0	185.3	73.5	1409.3	140.9	69.4	7110.4
22	970.6	22.2	7.0	259.5	15.5	10.8	1285.6
23	1885.8	39.7	21.7	433.7	46.4	69.3	2496.6
24	1992.3	70.8	38.4	537.6	78.0	40.0	2757.1
25	757.8	33.7	12.3	263.4	23.4	10.1	1100.7
26	1400.9	70.4	44.0	473.3	77.7	17.7	2084.0
CLASS TOT.	390288.3	22899.3	9698.4	112698.0	22548.0	7210.9	565342.9

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Exhibit 9A
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ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'1' SAFE DRIVER POINT

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	2253.2	137.6	47.9	180.7	126.6	40.2	2786.2
2	3047.9	179.1	79.4	321.6	223.8	60.7	3912.5
3	6790.7	547.9	192.6	632.4	553.9	130.2	8847.7
4	10118.7	752.1	319.5	1008.3	852.5	233.6	13284.7
5	9587.0	732.6	236.8	928.1	584.9	168.5	12237.9
6	9226.9	742.7	247.1	941.7	720.3	171.3	12050.0
7	13826.2	1059.2	352.4	1250.9	974.0	270.0	17732.7
8	9605.4	834.8	284.4	949.6	762.5	193.0	12629.7
9	4750.5	428.8	129.4	470.2	299.3	79.5	6157.7
10	3223.4	252.4	79.2	259.9	256.5	71.3	4142.7
11	4957.2	511.9	145.6	546.6	294.8	54.6	6510.7
12	7522.0	511.7	204.3	542.8	416.6	138.5	9735.9
13	5980.6	398.9	120.7	475.5	304.2	91.0	7370.9
14	966.5	64.9	21.3	76.8	43.9	14.1	1187.5
15	1243.1	69.4	18.1	117.7	62.6	17.4	1528.3
16	947.9	70.5	25.4	98.0	64.5	10.8	1217.1
17	525.8	32.0	16.0	33.9	37.0	11.1	655.8
18	483.7	28.3	9.7	43.4	25.8	7.2	598.1
19	521.8	21.4	8.8	28.9	19.4	11.9	612.2
20	494.9	37.1	8.5	44.4	24.7	6.5	616.1
21	1538.3	77.7	24.4	87.4	41.5	20.4	1789.7
22	312.8	9.2	2.6	8.6	5.2	3.5	341.9
23	667.9	19.3	8.0	21.2	17.3	24.6	758.3
24	626.0	33.3	11.8	46.9	30.1	12.6	760.7
25	210.2	14.6	5.9	10.8	8.4	2.8	252.7
26	390.3	27.3	12.3	35.7	25.6	4.9	496.1
CLASS TOT.	100218.9	7594.7	2612.1	9162.0	6775.9	1850.2	128213.8

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'2' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	1930.5	98.6	35.6	148.7	119.0	34.4	2366.8
2	2099.8	120.1	57.0	190.1	195.9	41.8	2704.7
3	5403.0	315.7	144.1	550.3	572.9	103.6	7089.6
4	7689.1	440.6	228.5	764.1	841.3	177.5	10141.1
5	7744.7	482.3	168.3	799.2	612.7	136.1	9943.3
6	7447.0	493.9	213.6	713.2	687.6	138.3	9693.6
7	11563.1	652.8	286.9	1072.2	974.8	225.8	14775.6
8	7622.3	532.6	201.1	814.0	741.4	153.1	10064.5
9	4107.6	283.0	94.8	414.8	318.1	68.8	5287.1
10	2581.0	148.2	80.3	232.3	266.3	57.1	3365.2
11	4516.1	329.7	128.3	518.2	355.9	49.7	5897.9
12	7923.1	390.1	202.7	614.9	584.5	138.5	9853.8
13	5087.4	273.4	98.6	512.8	337.3	77.4	6386.9
14	771.6	34.9	17.6	57.2	58.6	11.2	951.1
15	892.4	51.7	19.0	97.8	52.5	12.5	1125.9
16	842.0	43.9	22.1	85.9	68.7	9.6	1072.2
17	416.9	17.7	12.5	26.3	40.1	8.8	522.3
18	367.6	26.0	8.3	22.6	25.8	5.5	455.8
19	322.5	8.6	4.7	19.3	20.5	7.3	382.9
20	412.8	20.5	14.8	40.5	29.6	5.4	523.6
21	1152.5	45.6	18.5	64.4	50.3	15.3	1346.6
22	251.0	6.8	1.8	8.6	5.2	2.8	276.2
23	387.2	10.7	4.9	16.9	11.9	14.2	445.8
24	473.4	17.4	10.7	37.6	25.6	9.5	574.2
25	204.8	9.6	1.8	16.2	11.2	2.7	246.3
26	345.6	16.3	14.7	30.4	27.4	4.4	438.8
CLASS TOT.	82555.0	4870.7	2091.2	7868.5	7035.1	1511.3	105931.8

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'4' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	272.3	20.1	5.4	19.7	14.6	4.9	337.0
2	294.1	32.0	11.5	39.1	25.2	5.9	407.8
3	621.8	73.4	17.1	103.0	57.9	11.9	885.1
4	992.0	121.0	31.8	134.4	87.8	22.9	1389.9
5	1081.0	121.0	22.5	145.7	57.3	19.0	1446.5
6	947.1	118.3	20.5	138.7	71.4	17.6	1313.6
7	1540.9	147.0	42.6	220.3	93.3	30.1	2074.2
8	1067.0	122.7	31.7	147.4	77.9	21.4	1468.1
9	565.1	59.5	15.3	73.0	44.2	9.5	766.6
10	321.2	32.5	10.8	31.9	24.4	7.1	427.9
11	690.6	75.8	21.7	83.3	38.7	7.6	917.7
12	1009.7	72.8	21.6	87.2	45.4	17.7	1254.4
13	664.3	59.2	12.8	79.5	32.2	10.1	858.1
14	125.4	9.3	4.2	8.2	4.3	1.8	153.2
15	127.6	12.3	2.8	25.3	3.7	1.8	173.5
16	127.1	8.4	1.6	12.0	9.2	1.5	159.8
17	50.4	4.4	1.7	7.5	5.1	1.1	70.2
18	52.5	6.5	1.8	1.9	2.0	.8	65.5
19	50.3	1.1	.6	.0	.0	1.1	53.1
20	52.9	2.8	.6	5.8	4.0	.7	66.8
21	158.9	9.4	1.3	11.5	4.4	2.1	187.6
22	33.3	1.0	.0	.0	.0	.4	34.7
23	43.8	.8	.0	2.1	3.2	1.6	51.5
24	58.1	3.7	1.0	2.3	1.1	1.2	67.4
25	31.3	2.3	.9	3.6	1.9	.4	40.4
26	46.9	3.2	2.9	3.6	.9	.6	58.1
CLASS TOT.	11025.6	1120.5	284.7	1387.0	710.1	200.8	14728.7

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'3' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	274.7	24.2	5.9	41.8	18.4	4.9	369.9
2	357.4	46.3	12.7	85.9	37.4	7.1	546.8
3	841.2	125.7	25.9	195.6	81.0	16.1	1285.5
4	1317.3	193.4	50.1	264.8	160.2	30.4	2016.2
5	1269.5	178.9	43.9	243.6	112.2	22.3	1870.4
6	1240.1	184.2	37.3	273.4	114.5	23.0	1872.5
7	1935.3	244.2	62.3	375.4	155.6	37.8	2810.6
8	1364.0	203.5	46.4	275.2	148.8	27.4	2065.3
9	679.5	104.5	18.2	154.0	49.3	11.4	1016.9
10	427.9	57.9	9.7	75.5	37.1	9.5	617.6
11	781.7	128.3	29.0	178.3	60.2	8.6	1186.1
12	1231.5	132.3	39.0	168.4	78.1	21.5	1670.8
13	878.6	98.1	22.7	136.3	55.5	13.4	1204.6
14	152.7	14.8	2.9	19.6	10.3	2.2	202.5
15	185.4	17.2	4.2	27.2	8.3	2.6	244.9
16	137.2	14.8	5.4	22.3	9.2	1.6	190.5
17	71.4	8.8	1.7	5.6	8.2	1.5	97.2
18	86.0	7.1	1.8	17.0	5.0	1.3	118.2
19	80.1	4.8	1.2	4.8	1.0	1.8	93.7
20	83.2	11.1	1.1	9.6	5.9	1.1	112.0
21	247.6	17.5	2.5	18.4	8.7	3.3	298.0
22	48.0	2.9	.4	5.7	1.3	.5	58.8
23	87.5	3.3	1.4	6.3	1.1	3.2	102.8
24	90.3	6.4	2.0	23.5	7.8	1.8	131.8
25	37.7	4.1	.9	3.6	.9	.5	47.7
26	63.2	5.8	2.9	8.9	5.5	.8	87.1
CLASS TOT.	13969.0	1840.1	431.5	2640.7	1181.5	255.6	20318.4

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'5' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	71.5	13.0	1.6	13.5	6.9	1.3	107.8
2	114.2	18.3	2.3	18.2	14.8	2.3	170.1
3	223.1	41.5	8.8	43.0	14.1	4.3	334.8
4	340.1	61.4	14.0	57.6	22.4	7.8	503.3
5	358.7	59.6	11.5	56.7	19.9	6.3	512.7
6	327.1	66.4	10.3	74.0	29.3	6.1	513.2
7	514.8	84.8	13.3	95.6	46.7	10.1	765.3
8	346.1	71.7	14.7	62.6	25.4	7.0	527.5
9	181.7	37.0	5.7	33.8	11.9	3.0	273.1
10	109.0	19.8	5.1	16.0	12.7	2.4	165.0
11	189.2	45.2	8.4	55.0	11.7	2.1	311.6
12	285.9	39.3	11.6	36.1	15.4	5.0	393.3
13	214.3	25.8	4.9	38.9	13.4	3.3	300.6
14	31.9	5.4	.8	8.2	2.6	.5	49.4
15	36.6	7.4	.9	9.1	5.5	.5	60.0
16	46.8	5.9	1.1	8.6	5.9	.5	68.8
17	24.6	1.7	1.1	3.8	2.1	.5	33.8
18	23.5	4.7	.0	1.9	1.0	.3	31.4
19	11.3	1.1	1.8	2.4	1.0	.3	17.9
20	21.4	3.3	1.1	3.9	2.0	.3	32.0
21	61.9	4.1	.4	2.3	2.2	.8	71.7
22	12.7	.5	.0	.0	.0	.1	13.3
23	17.1	.8	.3	.0	1.1	.6	19.9
24	20.8	1.8	.0	2.3	1.1	.4	26.4
25	5.4	.5	.0	1.8	.0	.1	7.8
26	20.7	3.7	.6	.0	.9	.3	26.2
CLASS TOT.	3610.4	624.7	120.3	645.3	270.0	66.2	5336.9

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'6' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	43.1	4.7	1.1	9.8	2.3	.8	61.8
2	43.4	8.6	1.7	10.4	5.2	.9	70.2
3	105.3	21.0	2.2	22.2	6.6	2.0	159.3
4	174.3	31.0	7.9	39.8	18.9	4.0	275.9
5	190.9	31.3	5.2	36.1	9.5	3.4	276.4
6	148.3	37.4	8.7	40.9	9.5	2.8	247.6
7	277.7	46.9	10.6	47.1	20.7	5.4	408.4
8	170.1	35.5	4.5	39.1	15.8	3.4	268.4
9	103.8	17.6	3.4	16.2	6.8	1.7	149.5
10	44.1	12.7	1.1	8.7	2.9	1.0	70.5
11	124.2	21.9	6.1	23.3	3.6	1.4	180.5
12	149.8	19.7	7.4	18.0	2.7	2.6	200.2
13	118.3	17.0	3.4	19.5	5.4	1.8	165.4
14	28.5	3.9	1.7	6.5	3.4	.4	44.4
15	35.5	4.9	.0	3.6	1.8	.5	46.3
16	24.5	2.0	.5	6.9	.8	.3	35.0
17	9.4	.6	.0	.0	.0	.2	10.2
18	13.4	1.2	.0	1.9	1.0	.2	17.7
19	5.1	1.1	.0	.0	.0	.1	6.3
20	10.1	.6	1.1	1.9	1.0	.1	14.8
21	35.1	2.9	.4	2.3	.0	.5	41.2
22	5.9	.5	.0	.0	.0	.1	6.5
23	7.6	.4	.0	.0	.0	.3	8.3
24	11.4	1.4	.0	2.3	2.2	.2	17.5
25	8.6	.9	.0	.0	.0	.1	9.6
26	9.8	1.6	.0	1.8	.9	.1	14.2
CLASS TOT.	1898.2	327.3	67.0	358.3	121.0	34.3	2806.1

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'7' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	11.1	3.0	.0	1.2	.0	.2	15.5
2	21.1	5.7	.6	6.5	1.7	.4	36.0
3	56.4	13.2	2.8	15.6	5.8	1.1	94.9
4	68.8	19.9	4.3	16.5	6.0	1.6	117.1
5	65.7	20.1	2.1	12.9	6.4	1.2	108.4
6	57.1	18.7	3.8	14.5	6.0	1.1	101.2
7	114.4	23.7	4.3	16.6	8.6	2.2	169.8
8	93.4	22.4	2.8	20.9	8.8	1.9	150.2
9	44.8	14.0	1.1	10.8	4.3	.8	75.8
10	17.4	3.9	.0	10.2	.0	.4	31.9
11	50.1	8.6	2.2	5.0	1.8	.6	68.3
12	50.3	9.6	1.6	3.0	.9	.9	66.3
13	43.5	8.8	1.5	4.9	.0	.7	59.4
14	8.0	1.5	.0	1.6	.0	.1	11.2
15	12.2	2.5	.5	3.6	.0	.2	19.0
16	5.6	2.0	.5	1.7	.0	.1	9.9
17	5.9	.6	.0	1.9	1.0	.1	9.5
18	3.4	.6	.0	.0	.0	.0	4.0
19	5.1	.0	.0	.0	.0	.1	5.2
20	3.4	.0	.6	.0	.0	.0	4.0
21	12.4	1.8	.4	2.3	.0	.2	17.1
22	2.9	.0	.0	.0	.0	.0	2.9
23	2.9	.4	.0	.0	.0	.1	3.4
24	3.1	.5	.0	.0	1.1	.1	4.8
25	.0	.5	.0	.0	.0	.0	.5
26	4.4	.5	.0	.0	.0	.1	5.0
CLASS TOT.	763.4	182.5	29.1	149.7	52.4	14.2	1191.3

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'8' SAFE DRIVER POINTS

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	8.6	4.1	.5	3.7	.0	.2	17.1
2	13.7	4.0	1.2	2.6	1.7	.3	23.5
3	40.1	12.6	1.7	6.5	4.1	.8	65.8
4	61.4	14.0	1.8	13.7	6.9	1.4	99.2
5	58.4	15.9	2.1	11.6	4.0	1.0	93.0
6	52.3	13.9	2.7	10.6	.0	1.0	80.5
7	101.3	20.3	1.6	16.6	7.8	2.0	149.6
8	62.3	17.2	.6	7.8	4.4	1.3	93.6
9	27.1	6.1	2.3	8.1	1.7	.5	45.8
10	10.4	4.4	1.1	1.5	2.0	.2	19.6
11	45.6	10.6	2.2	11.7	3.6	.5	74.2
12	45.7	9.0	1.6	6.0	.9	.8	64.0
13	43.5	6.0	2.0	1.6	4.5	.7	58.3
14	8.0	1.5	.4	1.6	.0	.1	11.6
15	4.4	3.0	.0	.0	.0	.1	7.5
16	4.5	2.0	.0	1.7	.0	.1	8.3
17	3.5	.0	.0	1.9	.0	.1	5.5
18	3.4	.6	.0	.0	.0	.0	4.0
19	2.1	.5	.0	.0	.0	.0	2.6
20	4.5	.6	.0	.0	.0	.1	5.2
21	5.2	.6	.0	.0	.0	.1	5.9
22	2.9	.0	.0	.0	.0	.0	2.9
23	1.9	.0	.0	.0	1.1	.1	3.1
24	3.1	.0	.0	.0	.0	.1	3.2
25	2.2	.5	.5	.0	.0	.0	3.2
26	2.2	1.1	.6	.0	.9	.0	4.8
CLASS TOT.	618.3	148.5	22.9	107.2	43.6	11.5	952.0

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

'OVER 8' SAFE DRIVER PTS.

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	9.9	3.0	.0	.0	1.5	.2	14.6
2	16.1	8.6	1.7	7.8	.0	.3	34.5
3	45.1	16.2	3.3	10.4	5.0	.9	80.9
4	73.7	22.8	3.1	19.2	7.7	1.7	128.2
5	65.7	21.3	5.8	14.2	2.4	1.2	110.6
6	60.8	19.3	4.3	15.8	8.6	1.1	109.9
7	104.9	30.0	4.3	27.7	6.9	2.0	175.8
8	85.0	21.2	5.1	22.2	5.3	1.7	140.5
9	37.7	10.9	1.7	10.8	1.7	.6	63.4
10	24.3	6.1	1.1	1.5	2.0	.5	35.5
11	36.5	15.3	2.8	6.7	2.7	.4	64.4
12	54.9	12.8	3.2	9.0	4.5	1.0	85.4
13	35.7	11.5	1.5	8.1	.0	.5	57.3
14	10.3	1.0	.0	1.6	.9	.1	13.9
15	7.8	3.9	.5	5.4	.0	.1	17.7
16	5.6	2.0	.5	.0	.0	.1	8.2
17	3.5	1.1	.0	1.9	1.0	.1	7.6
18	4.5	1.2	.5	.0	.0	.1	6.3
19	4.1	.5	.0	.0	.0	.1	4.7
20	2.2	1.1	.0	.0	1.0	.0	4.3
21	7.2	.6	.4	.0	.0	.1	8.3
22	2.0	.0	.0	.0	.0	.0	2.0
23	1.9	.4	.0	.0	.0	.1	2.4
24	3.1	.9	.0	.0	1.1	.1	5.2
25	3.2	.0	.0	.0	.0	.0	3.2
26	5.5	1.1	.6	1.8	.9	.1	10.0
CLASS TOT.	711.2	212.8	40.4	164.1	53.2	13.1	1194.8

ESTIMATED 1984 LIABILITY EXPOSURES FOR SAFE DRIVER PLAN

TOTAL FOR ALL CATEGORIES

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	69795.8	2155.0	747.2	3020.3	1920.1	1245.4	78883.8
2	68794.7	2262.0	929.4	3651.2	2728.5	1370.8	79736.6
3	171614.6	6439.1	2514.1	9723.3	7661.8	3289.8	201242.7
4	233437.1	9147.8	4076.9	13302.5	10995.4	5388.2	276347.9
5	237727.2	9090.7	2927.8	13820.1	8178.6	4177.3	275921.7
6	211455.8	8640.5	3032.8	12635.5	8888.9	3926.5	248580.0
7	320565.6	11972.0	4398.7	18285.5	12101.4	6260.5	373583.7
8	214841.6	9124.6	3210.0	13679.5	9075.2	4316.5	254247.4
9	107984.3	5070.4	1559.5	7108.0	3924.7	1808.1	127455.0
10	70958.0	2747.5	1138.7	3830.6	3017.2	1569.9	83261.9
11	116916.0	6227.4	1868.2	8958.4	4168.9	1287.5	139426.4
12	198058.6	7014.6	2785.8	9801.1	6620.4	3463.2	227743.7
13	134450.2	5047.2	1607.4	7777.7	4005.9	2046.1	154934.5
14	21050.6	702.2	268.3	1100.0	692.7	306.4	24120.2
15	22476.4	839.3	243.8	1459.4	633.2	314.8	25966.9
16	21161.9	751.6	313.4	1208.2	716.5	241.9	24393.5
17	10773.7	355.3	170.9	477.8	464.9	227.8	12470.4
18	9155.5	399.3	140.4	524.1	317.6	136.0	10672.9
19	8995.1	265.7	77.8	409.7	170.9	204.4	10123.6
20	9805.5	383.5	146.3	540.0	303.3	128.4	11307.0
21	29019.0	1049.3	256.1	1597.9	640.2	385.1	32947.6
22	5877.6	153.7	27.2	282.4	65.8	65.3	6472.0
23	13655.2	371.6	82.1	480.2	195.5	502.1	15286.7
24	13366.7	482.9	152.9	652.5	313.1	268.7	15236.8
25	5556.0	185.5	64.2	299.4	137.5	73.7	6316.3
26	9225.1	314.4	158.4	555.5	306.1	116.8	10676.3
CLASS TOT.	2336717.8	91193.1	32898.3	135180.8	88244.3	43121.2	2727355.5

1982 TOTAL INDUSTRY ADJUSTED EXPOSURES

PART 4 (PDL)

CLASS / TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	69795.7	2154.8	747.2	3020.4	1920.1	1245.3	78883.5
2	68794.8	2262.0	929.4	3651.3	2728.7	1370.8	79737.0
3	171614.7	6439.2	2514.1	9723.4	7661.7	3289.7	201242.8
4	233437.0	9147.8	4076.9	13302.5	10995.5	5388.3	276348.0
5	237727.2	9090.6	2927.8	13820.2	8178.6	4177.2	275921.6
6	211455.8	8640.6	3032.8	12635.5	8888.8	3926.4	248579.9
7	320565.5	11972.0	4398.6	18285.5	12101.4	6260.6	373583.6
8	214841.5	9124.6	3210.1	13679.6	9075.0	4316.5	254247.3
9	107984.3	5070.4	1559.5	7107.9	3924.7	1808.1	127454.9
10	70958.0	2747.4	1138.9	3830.5	3017.0	1569.9	83261.7
11	116916.0	6227.4	1868.2	8958.4	4168.9	1287.5	139426.4
12	198058.6	7014.6	2785.7	9801.1	6620.5	3463.2	227743.7
13	134450.3	5047.2	1607.4	7777.7	4005.9	2046.1	154934.6
14	21050.6	702.2	268.3	1100.2	692.8	306.5	24120.6
15	22476.4	839.2	243.6	1459.4	633.1	314.7	25966.4
16	21161.9	751.4	313.4	1208.3	716.5	241.8	24393.3
17	10773.6	355.2	170.9	477.8	465.1	227.8	12470.4
18	9155.3	399.2	140.4	524.0	317.6	136.1	10672.6
19	8995.3	265.6	77.6	409.7	170.9	204.5	10123.6
20	9805.6	383.4	146.3	540.0	303.3	128.4	11307.0
21	29019.0	1049.2	256.1	1597.8	640.2	385.0	32947.3
22	5877.8	153.6	27.1	282.3	65.7	65.4	6471.9
23	13655.2	371.6	82.1	480.2	195.4	502.1	15286.6
24	13366.9	482.8	152.9	652.6	313.3	268.7	15237.2
25	5556.1	185.2	64.2	299.5	137.5	73.8	6316.3
26	9224.9	314.2	158.4	555.4	306.1	116.8	10675.8
CLASS TOT.	2336718.0	91191.4	32897.9	135181.2	88244.3	43121.2	2727354.0

AGE CLASS 1 ALL OPERATORS 23 YEARS AND OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	503	79	20	7	3	0	0	1	0	0	0	613
01	33,902	7,318	1,626	1,208	197	195	53	32	9	7	8	44,955
02	33,204	8,609	2,289	1,390	271	221	88	33	17	11	12	46,225
03	84,567	20,968	5,046	3,549	627	458	175	79	44	30	35	115,578
04	117,584	30,609	7,701	5,337	1,014	735	264	137	54	49	59	163,542
05	120,964	29,519	7,201	5,336	986	814	286	148	53	46	53	165,406
06	107,099	27,370	7,055	5,152	959	717	253	118	46	43	50	148,862
07	164,361	41,993	10,693	8,048	1,510	1,181	413	220	95	81	86	228,681
08	110,583	28,895	7,507	5,457	1,076	835	283	134	77	49	67	154,963
09	56,713	14,552	3,748	2,974	540	443	150	85	37	21	31	79,294
10	37,180	8,871	2,542	1,837	335	241	90	36	14	9	21	51,176
11	62,624	15,615	3,992	3,316	628	550	159	107	42	39	31	87,103
12	105,499	24,262	6,233	5,592	969	791	237	125	42	40	47	143,837
13	79,950	17,193	4,953	3,859	747	542	188	97	38	38	31	103,636
14	11,147	2,814	794	565	121	100	28	21	7	6	9	15,612
15	12,788	3,014	1,065	715	162	109	33	32	11	4	7	17,940
16	11,526	2,860	777	633	118	104	38	21	5	4	5	16,091
17	5,191	1,253	410	286	58	42	19	8	5	3	3	7,278
18	4,728	1,338	410	286	70	47	19	11	3	3	4	6,919
19	5,586	1,310	480	278	74	46	10	4	5	2	3	7,798
20	5,067	1,391	401	309	69	44	19	9	3	4	2	7,318
21	17,739	4,788	1,420	1,031	235	148	60	31	11	5	7	25,475
22	3,910	931	304	235	47	31	13	6	2	3	2	5,484
23	10,186	1,864	668	375	87	45	18	6	3	2	2	13,256
24	8,587	1,760	562	397	83	51	19	10	3	3	3	11,478
25	3,460	863	178	166	34	28	5	6	0	2	3	4,545
26	5,469	1,195	333	268	53	41	19	9	4	2	5	7,398
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	1,218,117	301,113	78,408	58,606	11,073	8,559	2,939	1,526	630	506	586	1,680,663

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

9. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 2 ALL OPERATORS 20-22 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	188	37	11	5	2	1	1	0	0	0	1	226
01	2,274	854	233	167	41	34	22	8	5	7	5	3,650
02	2,150	1,065	313	210	81	56	32	15	10	7	15	3,954
03	5,921	2,845	911	525	209	122	69	35	22	21	27	10,707
04	8,804	4,016	1,287	754	331	207	105	53	34	24	39	15,654
05	8,668	3,915	1,241	817	303	205	101	53	34	27	36	15,400
06	7,706	3,797	1,230	818	305	196	110	62	31	23	32	14,310
07	11,618	5,478	1,874	1,155	432	260	150	83	42	36	53	21,181
08	8,419	4,249	1,456	929	355	214	125	62	39	30	37	15,915
09	4,571	2,195	706	466	172	98	61	29	23	10	18	8,349
10	2,776	1,234	458	269	105	59	36	23	7	8	11	4,986
11	5,190	2,452	770	496	193	114	68	33	13	16	23	9,368
12	8,056	2,891	963	734	249	137	74	37	18	17	24	13,200
13	5,512	2,059	728	499	179	108	47	31	16	11	21	9,211
14	798	351	132	71	30	19	11	8	3	3	2	1,428
15	966	389	141	105	35	25	15	10	5	6	8	1,705
16	835	383	143	89	30	17	12	4	4	4	4	1,525
17	375	147	58	32	16	8	3	1	1	0	2	643
18	394	153	48	44	12	11	8	2	1	1	2	676
19	334	90	40	16	9	2	2	2	0	1	1	497
20	391	162	67	37	20	5	6	1	0	1	2	692
21	1,204	317	133	78	30	16	7	5	3	1	1	1,795
22	229	46	19	14	6	2	1	1	0	0	0	318
23	722	97	47	26	8	2	2	1	1	0	1	907
24	759	155	73	38	14	8	4	3	1	0	2	1,057
25	261	74	32	21	9	5	1	2	1	1	0	407
26	349	134	52	31	11	6	7	3	1	2	2	598
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	89,450	39,585	13,168	8,446	3,187	1,937	1,080	567	351	297	469	158,156

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 3 ONE OR MORE OPERATORS 20-22 YEARS, ANOTHER 23 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	29	4	1	3	0	0	0	1	0	0	0	38
01	826	379	89	66	11	10	3	2	0	1	0	1,387
02	859	464	138	99	22	20	4	3	1	2	3	1,615
03	2,472	1,361	349	261	47	31	16	4	5	3	6	4,555
04	3,539	2,053	523	374	82	52	23	13	7	3	5	6,674
05	3,015	1,633	453	322	84	43	22	10	4	4	11	5,601
06	2,929	1,666	457	395	69	38	19	16	7	5	8	5,609
07	4,284	2,517	662	539	117	80	25	20	8	3	8	8,263
08	2,877	1,746	502	355	82	56	26	8	5	1	9	5,667
09	1,456	812	228	167	32	27	10	6	2	4	3	2,747
10	1,066	602	139	141	17	19	9	2	0	2	2	1,999
11	1,767	962	261	230	52	39	15	11	4	4	5	3,350
12	2,916	1,438	388	385	74	41	22	14	3	3	6	5,290
13	1,794	924	245	200	46	26	10	7	3	4	3	3,262
14	332	193	51	42	7	10	2	4	0	1	0	642
15	272	155	39	41	9	6	2	0	1	0	1	526
16	311	164	47	41	10	3	2	1	1	0	1	581
17	162	80	28	22	3	3	2	0	0	0	0	300
18	163	93	21	18	4	4	0	0	0	0	1	304
19	74	30	15	8	2	1	3	0	0	0	0	133
20	135	73	15	26	2	1	2	2	1	0	0	257
21	320	175	58	44	6	3	1	1	1	0	1	610
22	42	19	7	5	1	0	0	0	0	0	0	74
23	131	62	23	14	4	0	1	0	0	0	0	235
24	174	75	23	21	4	2	0	0	0	0	0	299
25	92	27	13	4	2	2	0	0	0	1	0	141
26	136	75	21	25	5	5	1	0	0	1	1	270
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	32,173	17,782	4,413	3,848	794	522	220	125	52	42	79	60,420

FOOTNOTES: 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 4 ALL OPERATORS 16-19 YEARS

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	51	17	3	4	1	0	0	0	0	0	0	76
01	1,805	311	147	121	34	16	11	8	1	3	0	2,457
02	1,907	373	247	146	66	30	14	8	5	2	6	2,804
03	5,245	1,001	485	422	150	79	33	17	12	5	8	7,457
04	6,719	1,288	735	557	193	98	42	29	12	10	14	9,697
05	7,663	1,314	720	620	189	113	44	28	10	9	11	10,721
06	6,620	1,264	713	540	207	105	56	31	11	8	12	9,567
07	9,301	1,645	903	774	271	159	69	34	12	12	20	13,200
08	7,332	1,362	728	624	211	113	48	30	16	6	17	10,487
09	3,730	649	348	307	114	54	25	12	8	6	8	5,261
10	1,854	345	179	160	52	22	11	6	7	1	1	2,638
11	3,906	613	328	311	107	90	33	14	3	7	4	5,376
12	4,852	679	361	409	112	58	24	12	2	4	6	6,519
13	3,514	492	293	316	84	49	24	12	3	1	5	4,793
14	471	91	47	35	12	5	5	4	1	1	1	673
15	547	99	65	54	15	14	5	2	2	0	3	806
16	487	78	57	50	13	7	5	4	1	1	0	703
17	175	35	18	14	3	4	2	0	1	1	1	254
18	206	25	23	12	9	1	1	1	0	0	0	278
19	128	19	12	8	2	0	1	0	0	0	0	170
20	198	27	23	21	5	3	2	1	0	0	0	280
21	559	54	38	28	8	5	1	1	1	0	0	695
22	85	6	3	3	2	0	0	0	0	0	0	99
23	183	22	16	8	3	1	0	0	0	0	0	227
24	202	27	20	16	10	1	1	1	0	0	0	278
25	133	13	8	9	2	2	1	0	0	0	0	168
26	224	41	20	17	5	2	0	1	0	0	1	311
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	68,097	11,680	6,532	5,366	1,680	991	458	256	116	77	118	95,771

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

POLICY YEARS EXPOSURE

AGE CLASS 5 ONE OR MORE OPERATORS 16-19 YEARS, ANOTHER 20 YEARS OR OLDER

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	10	2	1	2	0	1	0	0	0	0	0	16
01	1,490	635	165	159	24	19	9	3	0	0	2	2,302
02	1,667	886	257	225	43	29	17	6	2	2	0	3,134
03	5,254	2,440	670	693	98	70	17	8	7	5	6	9,268
04	6,984	3,458	990	977	186	102	26	22	7	8	9	12,769
05	5,861	2,646	735	770	141	72	25	12	8	5	3	10,278
06	5,764	2,631	837	799	133	83	34	11	7	0	10	10,329
07	7,828	3,527	1,127	1,128	180	108	54	24	10	9	8	14,003
08	5,650	2,672	871	847	170	89	29	18	10	5	6	10,367
09	2,602	1,146	352	374	58	52	14	8	5	2	2	4,615
10	1,707	767	263	273	38	25	13	3	0	2	2	3,093
11	2,574	1,204	328	398	67	43	13	4	2	4	3	4,638
12	4,318	1,710	459	644	86	50	17	3	1	1	5	7,294
13	2,551	1,089	340	377	62	36	15	6	0	3	0	4,477
14	456	204	51	68	12	5	3	4	0	0	1	804
15	380	162	68	57	9	4	6	2	0	0	0	688
16	433	233	77	82	11	11	7	1	0	0	0	855
17	252	108	36	39	8	5	2	0	1	0	1	452
18	182	77	26	26	5	2	1	1	0	0	0	320
19	89	37	19	20	1	0	1	0	0	0	0	167
20	172	66	25	30	6	4	2	1	0	0	1	307
21	359	129	38	46	8	4	2	0	0	0	0	586
22	30	12	4	4	1	0	0	0	0	0	0	51
23	105	43	16	11	1	3	1	0	0	1	0	181
24	148	70	27	23	7	1	1	2	1	0	1	281
25	98	25	9	12	1	2	0	0	0	0	0	147
26	181	85	28	30	6	1	1	1	0	1	1	335
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	57,145	28,080	7,814	8,108	1,362	821	310	140	81	50	81	104,457

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 6 ONE OR MORE OPERATORS 69 YEARS OR OLDER, NONE UNDER 23

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN - NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	80	7	2	4	0	0	0	0	0	0	0	93
01	10,493	985	203	359	26	26	5	3	0	0	0	12,100
02	7,929	771	167	302	17	16	4	2	0	0	1	9,209
03	18,153	1,941	371	761	44	38	3	5	1	2	1	21,320
04	22,415	2,564	541	926	59	73	13	5	2	1	1	26,600
05	25,381	2,841	683	1,033	58	75	9	9	1	2	1	30,093
06	20,967	2,439	534	973	61	62	16	4	1	0	0	25,057
07	33,476	4,011	909	1,655	114	112	19	13	1	4	2	40,316
08	20,550	2,327	514	908	63	56	6	8	1	3	4	24,440
09	10,176	1,199	279	508	36	36	4	3	1	2	1	12,245
10	8,358	959	238	389	34	36	4	2	1	0	0	10,021
11	12,808	1,553	358	647	58	56	7	2	2	1	1	15,493
12	24,061	3,056	695	1,337	108	92	13	6	2	0	1	29,371
13	14,089	1,498	404	698	40	53	4	9	1	1	1	16,796
14	2,369	294	54	112	13	10	0	4	0	1	0	2,857
15	1,926	230	55	89	5	6	0	0	0	0	0	2,311
16	2,348	322	73	122	5	10	4	1	0	0	0	2,885
17	1,620	187	39	70	3	1	2	0	0	0	0	1,922
18	1,067	133	23	43	7	0	2	1	0	0	0	1,276
19	787	98	28	36	4	3	1	1	0	0	1	959
20	1,157	137	39	58	5	3	0	0	0	0	0	1,399
21	2,196	283	71	86	5	6	0	3	1	0	0	2,651
22	410	59	15	21	2	3	0	0	1	0	0	511
23	904	118	34	32	5	1	0	2	0	0	0	1,096
24	1,127	139	41	59	4	5	1	1	0	0	0	1,397
25	524	40	17	24	1	1	0	2	0	0	0	609
26	893	90	25	49	5	2	0	0	0	0	0	1,064
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	246,264	28,299	6,412	11,301	782	782	117	86	18	17	15	294,091

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS 7 OPERATOR DATE OF BIRTH NOT GIVEN

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN – NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	24	0	0	0	0	0	0	0	0	0	0	24
01	379	12	0	1	0	0	0	0	0	0	0	388
02	440	8	1	1	0	0	0	0	0	0	0	450
03	1,237	36	2	3	0	0	0	0	0	0	0	1,278
04	1,738	32	3	5	0	0	0	0	0	0	0	1,778
05	1,444	38	3	4	0	1	0	1	0	0	0	1,491
06	1,303	34	2	3	0	0	0	0	0	0	0	1,342
07	1,969	47	5	6	0	0	0	0	0	0	0	2,027
08	1,305	32	1	3	0	1	0	0	0	0	0	1,342
09	563	4	0	1	0	0	0	0	0	0	0	568
10	436	9	0	2	0	0	0	0	0	0	0	447
11	423	12	0	2	0	0	0	0	0	0	0	437
12	999	23	2	3	0	0	0	0	0	0	0	1,027
13	542	9	1	1	0	0	0	0	0	0	0	553
14	99	1	0	0	0	0	0	0	0	0	0	100
15	53	0	0	0	0	0	0	0	0	0	0	53
16	83	0	0	0	0	0	0	0	0	0	0	83
17	28	0	0	0	0	0	0	0	0	0	0	28
18	19	0	0	0	0	0	0	0	0	0	0	19
19	37	0	0	0	0	0	0	0	0	0	0	37
20	15	0	0	0	0	0	0	0	0	0	0	15
21	48	2	0	1	0	0	0	0	0	0	0	51
22	13	1	0	0	0	0	0	0	0	0	0	14
23	246	3	0	1	0	0	0	0	0	0	0	250
24	40	0	0	0	0	0	0	0	0	0	0	40
25	13	1	0	0	0	0	0	0	0	0	0	14
26	24	0	0	0	0	0	0	0	0	0	0	24
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	13,516	304	28	37	0	2	0	1	0	0	0	13,888

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

2. CLAIMS ARE AT-FAULT ACCIDENTS SUBMITTED BY INSURERS UNDER THE MERIT RATING PLAN

3. TERRITORY TABLE IS THE ONE PROPOSED FOR 1984 BY MASSACHUSETTS AUTO RATING AND ACCIDENT PREVENTION BUREAU

4. POINTS AND AGING OF OFFENSES ACCORDING TO THE SAFE DRIVER INSURANCE PLAN

5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

AGE CLASS ALL

TERRITORY	CREDIT ELIGIBLE	SAFE DRIVER INSURANCE PLAN – NUMBER OF POINTS 0	1	2	3	4	5	6	7	8	OVER 8	ALL
00	865	146	38	25	6	2	1	2	0	0	1	1,086
01	51,165	10,494	2,463	2,077	333	300	103	56	15	18	15	67,039
02	48,156	12,256	3,412	2,373	500	372	159	67	35	24	37	67,391
03	122,849	30,592	7,834	6,214	1,175	798	313	148	91	66	83	170,163
04	167,783	44,019	11,780	8,930	1,865	1,267	473	259	116	95	127	236,714
05	172,996	41,906	11,036	8,902	1,761	1,323	487	261	110	93	115	238,990
06	152,388	39,221	10,828	8,680	1,734	1,201	488	242	103	79	112	215,076
07	232,837	59,218	16,173	13,305	2,624	1,900	730	394	168	145	177	327,671
08	156,716	41,283	11,579	9,123	1,957	1,364	517	260	148	94	140	223,181
09	79,811	20,557	5,661	4,797	952	710	264	143	76	45	63	113,079
10	53,377	12,787	3,819	3,071	581	402	163	72	29	22	37	74,360
11	89,292	22,411	6,037	5,398	1,105	852	295	171	66	71	67	125,765
12	150,701	34,059	9,101	9,104	1,598	1,169	387	197	88	65	89	206,538
13	103,952	23,258	6,964	5,950	1,158	814	288	162	61	60	61	142,728
14	15,672	3,949	1,129	893	195	149	49	45	11	12	13	22,116
15	16,932	4,049	1,433	1,061	235	164	61	46	19	10	19	24,029
16	16,023	4,040	1,174	1,017	187	152	68	32	11	9	10	22,723
17	7,803	1,810	589	463	91	63	30	9	8	4	7	10,877
18	6,759	1,819	551	429	107	65	31	16	4	4	7	9,792
19	7,035	1,584	594	366	92	52	18	7	5	3	5	9,761
20	7,135	1,856	570	481	107	60	31	14	4	5	5	10,268
21	22,425	5,748	1,758	1,314	292	182	71	41	17	6	9	31,863
22	4,719	1,074	352	282	59	36	14	7	3	3	2	6,551
23	12,477	2,209	798	467	108	52	22	9	4	3	3	16,152
24	11,037	2,246	746	554	122	68	26	17	5	3	6	14,830
25	4,581	843	255	236	49	40	7	10	1	4	3	6,029
26	7,276	1,620	479	420	85	57	28	14	5	6	10	10,000
ERROR	0	0	0	0	0	0	0	0	0	0	0	0
ALL	1,722,762	425,058	117,135	93,432	19,078	13,614	5,184	2,701	1,185	949	1,223	2,404,772

2,147,700

10.7%

FOOTNOTES 1. EXPOSURE IS POLICY YEARS FOR CALENDAR YEAR 1982 FROM MERIT RATING INQUIRY RESPONSES

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5. POINTS REDUCED IN PROPORTION TO SURCHARGES PAID UNDER THE MERIT RATING PLAN

1984 Massachusetts Private Passenger Automobile
Estimated Residual Market Exposures by SDIP Status
Explanatory Memorandum

One of the impacts of the introduction of the SDIP will be to change the size of the Residual Market deficit (see Exhibit 4). A priori, we expect that the Residual Market population will include relatively more surcharged drivers and relatively fewer "clean" drivers than are observed in the total market; this kind of pattern would reduce the Residual Market deficit. Estimates of the Residual Market exposure distribution by SDIP point are needed in order to quantify this effect. Exhibit 10 details the exposure estimates made by MARB.

Data from the Merit Rating Board confirms the a priori expectation: Exhibit 10F indicates that in 1982 Residual Market policyholders paid 75% of the total Merit Rating surcharges and received 37% of the Merit Rating credits.

Based on this information, MARB has assumed that the number of "clean" drivers in the Residual Market equals 37% of the number of "clean" drivers in the total market (Exhibit 10A).

The distribution of Residual Market exposures with 1 point or more is estimated (in Exhibit 10E) from the following information and assumptions:

a) The Total Market exposures by point are known (from Exhibit 9A)

b) A set of surcharges by SDIP, estimated to be equivalent to 1982 Merit Rating surcharges, is selected judgmentally

c) The Residual Market exposures are constrained to produce 75% of the Total Market surcharge dollars

d) The Residual Market is assumed to account for 100% of the Total Market exposures with over 8 SDIP points

e) The Residual Market exposures as a percentage of Total Market exposures are assumed to decline linearly as points decrease.

This set of constraints produces a unique set of Residual Market exposures by surcharge level (Exhibit 10E).

Residual Market exposures not assigned to the "credit" or "surcharge" categories are assigned to the "no credit-no surcharge" category (Exhibit 10A).

Finally, to estimate the total credit dollars that will be allowed to Residual Market policyholders, the distribution of "clean" Residual Market drivers by territory and class is required. Exhibit 10B describes the judgmental method used to make this distribution, and Exhibit 10 displays the results.

#1350 Exhibit 10A

Massachusetts Private Passenger Automobile
Summary of Estimated Residual Market PDL Exposures by SDIP Status

		Total Market	Residual Market
(1)	Total exposures	2727356[2]	1269293[1]
(2)	SDIP credit exposures	1881339[2]	696095[3]
(3)	SDIP non-credit exposures = (1)-(2)	846017	573198
(4)	SDIP non-credit exposures by point[4]		
	0 (no surcharge-no credit)	565343	372162
	1	128214	87827
	2	105932	76271
	3	20318	15340
	4	14729	11636
	5	5337	4403
	6	2806	2413
	7	1191	1066
	8	952	885
	over 8	1195	1195

1 Exhibit 10D
2 Exhibit 9A
3 37% of total market credit exposures; see Exhibit 10F. The distribution of these exposures by class-territory is described in Exhibits 10B and displayed in Exhibit 10C.
4 Total market from Exhibit 9A, Facility 1 point and higher exposures are from Exhibit 10E; Facility 0 point exposures selected to balance sum of Facility non-credit exposures to line (3).

Massachusetts Private Passenger Automobile
Estimated SDIP Credit Facility PDL Exposures by Class-Territory

Let $TE_{t,c}$ denote total market exposures by territory-class (Exhibit 9B)

$TE_{t,c,-1}$ denote SDIP credit total market exposures by territory-class (Exhibit 9A)

$FE_{t,c}$ denote Facility exposures by territory-class (Exhibit 10D)

$FE_{t,c,-1}$ denote SDIP credit Facility exposures by territory-class (Estimated below and displayed in Exhibit 10C)

Omission of the t,c subscripts denotes statewide totals over territory and class.

$TE_{-1} = 1881339$; $FE_{-11} = 696095$; $FE = 1269293$

Estimate $FE_{t,c,-1}$ as

$$FE_{t,c,-1} = TE_{t,c,-1} \times \frac{FE_{t,c}}{TE_{t,c}} \times K$$

Where K is a constant factor selected so that

$$\sum_t \sum_c FE_{t,c,-1} = 696095$$

Exhibit 10C displays the resulting SDIP credit Facility exposures by class-territory.

ESTIMATED FACILITY EXPOSURES (ADJUSTED TO 1984 BASIS)

CLASS TERRITORY	CREDIT ELIGIBLE 10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	14198.1	959.4	174.9	.0	397.4	266.8	15996.6
2	13379.5	872.1	194.4	.0	497.3	297.4	15240.7
3	36783.8	2526.8	561.3	.0	1579.5	773.6	42225.0
4	49928.9	3689.2	888.8	.0	2213.4	1266.6	57986.9
5	55658.0	3732.6	729.4	.0	1863.8	1048.8	63032.6
6	48977.0	3361.7	689.9	.0	1937.4	984.3	55950.3
7	80423.9	4803.0	1058.2	.0	2828.3	1750.8	90864.2
8	56183.5	3631.7	786.2	.0	2115.9	1198.5	63915.8
9	30081.3	2049.2	388.4	.0	979.8	553.6	34052.3
10	19615.1	1129.8	276.3	.0	743.0	509.8	22274.0
11	35966.5	2588.7	578.9	.0	1213.0	400.8	40747.9
12	59542.9	3142.7	747.4	.0	1809.1	1133.0	66375.1
13	45524.4	2273.5	485.1	.0	1125.0	700.9	50108.9
14	7542.3	304.0	73.2	.0	204.6	109.7	8233.8
15	8761.6	345.2	66.1	.0	193.8	116.5	9483.2
16	8606.3	309.0	105.0	.0	218.8	98.8	9337.9
17	3006.9	143.1	39.1	.0	103.9	68.4	3361.4
18	3016.0	164.7	35.6	.0	84.8	42.0	3343.1
19	3605.2	138.1	23.0	.0	42.6	65.9	3874.8
20	3216.6	153.7	35.4	.0	77.0	43.4	3526.1
21	12696.4	535.1	72.1	.0	227.8	173.1	13704.5
22	2919.4	86.3	11.7	.0	26.1	29.8	3073.3
23	5921.7	230.7	30.8	.0	71.1	216.5	6470.8
24	5296.4	264.9	58.6	.0	90.8	111.6	5822.3
25	2490.8	96.1	27.5	.0	50.8	35.5	2700.7
26	4045.1	143.2	53.9	.0	98.3	52.7	4393.2
CLASS TOT.	617387.6	37674.5	8191.2	.0	20793.3	12048.8	696095.4

ESTIMATED FACILITY EXPOSURES (ADJUSTED TO 1984 BASIS)

CLASS TERRITORY	10-15	17	18	20-25	21-26	30	TERRITORY TOTAL
1	21462.4	1825.0	348.1	2571.0	789.7	403.3	27399.5
2	21356.9	1900.8	432.6	3143.9	1107.4	474.7	28416.3
3	58066.6	5413.2	1225.1	8421.6	3299.8	1221.2	77647.5
4	80321.7	7769.2	1985.5	11490.3	4793.3	2037.6	108397.6
5	88068.8	7854.4	1605.0	12199.9	3871.4	1659.5	115259.0
6	78782.6	7394.8	1565.1	11121.9	4113.5	1583.3	104561.2
7	129524.2	10370.4	2417.1	16398.6	5994.1	2819.7	167524.1
8	91044.1	8132.2	1834.2	12411.9	4598.5	1942.1	119963.0
9	48762.4	4433.8	868.0	6450.7	2057.5	897.4	63469.8
10	31222.9	2404.2	613.8	3488.5	1594.2	811.5	40135.1
11	57943.0	5533.4	1300.4	8193.4	2588.9	645.7	76204.8
12	94287.6	6099.4	1606.2	8784.0	3619.7	1794.1	116191.0
13	72123.9	4500.2	1045.2	7138.1	2338.5	1110.4	88256.3
14	12208.2	644.4	167.3	1014.6	427.9	177.5	14639.9
15	14282.5	720.8	151.3	1344.4	416.1	189.9	17105.0
16	13941.2	668.0	232.2	1131.8	511.2	160.1	16644.5
17	4811.9	290.6	85.7	406.1	221.6	109.5	5925.4
18	5051.9	334.2	79.0	459.8	176.0	70.3	6171.2
19	5868.4	242.8	48.3	373.5	95.2	107.3	6735.5
20	5336.7	322.8	80.0	475.9	162.8	71.9	6450.1
21	21218.7	944.4	162.9	1486.0	440.4	289.3	24541.7
22	4797.8	142.4	24.3	272.6	52.7	49.0	5338.8
23	9077.4	343.0	65.3	451.0	142.7	331.9	10411.3
24	8316.1	436.2	120.1	600.5	204.3	175.2	9852.4
25	3817.4	177.4	49.6	270.2	91.0	54.5	4460.1
26	6373.0	289.6	126.8	503.0	216.8	83.0	7592.2
CLASS TOT.	988068.3	79187.6	18239.1	120603.2	43925.2	19269.9	1269293.3

Massachusetts Private Passenger Automobile
Selection of Facility Exposures by SDIP Point

SDIP Points	Assumed Equivalent 1982 Merit Rating Surcharges[1]	Total Market Exposures by SDIP Point[2]	Estimated Facility Exposures by SDIP Point[3]	Facility ÷ Total Market
1	60	128214	87827	.685
2	120	105932	76271	.720
3	180	20318	15340	.755
4	240	14729	11636	.790
5	300	5337	4403	.825
6	360	2806	2413	.860
7	420	1191	1066	.895
8	480	952	885	.930
over 8 (10)	600	1195	1195	1.000
Total 1982 dollars generated		31,882,320	23,755,080	.75

1 Judgmentally selected at fixed dollar amount per point to produce approximately same total surcharge dollars as in Exhibit 10F.

2 Exhibit 9A.

3 Selected to satisfy the following judgmental constraints:

a) Total dollars generated by Facility exposures equal 75% of total dollars generated by all exposures (see Exhibit 10F)
b) Facility exposures = Total exposures for "over 8 point" group
c) Facility exposures as a percentage of Total exposures declines linearly as points decrease

Massachusetts Private Passenger Automobile
Estimation of 1982 Residual Market Share of Credits and Surcharges

Merit Rating Board Financial Transactions 11/1/81 - 10/31/82[1]	Residual Market	Total Market	Ratio
Credits	12,796,019	34,939,885	.37
Surcharge Dollars	24,054,171	32,253,646	.75

1 Based on Merit Rating Board reconciliation reports, per Conger telephone conversation with David Lewis 11/28/83.

APPENDIX A

CHAPTER 241 OF THE ACTS OF 1983

SECTION 11 (EXCERPTS)

In so fixing and establishing classifications of risks under this section, the commissioner shall establish a safe driver insurance plan to equitably reflect the driving records of insureds. Such plan shall reflect an adjustment of insurance premium based on at-fault accidents, convictions of moving violations of motor vehicle laws, including payments pursuant to chapter ninety C, or any combination thereof, and based on four or more comprehensive claims totalling two thousand dollars or more, unless fire, theft, comprehensive and collision coverages are not purchased by the insured, as compiled and recorded by the motor vehicle insurance merit rating board established pursuant to section one hundred and eighty-three of chapter six.

Such an adjustment shall reflect an aggregate credit to safe drivers' premiums, which shall equal the increase in aggregate premiums to be charged to those not defined as safe drivers, categorized under the safe driver plan.

No safe driver insurance plan shall use any records or factors which occurred more than three years prior to the policy year for which an adjustment of insurance cost is reflected.

The commissioner shall establish reasonable rules to assure that all insureds are informed of any premium adjustments, and the reasons therefore, made as the result of this safe driver insurance plan.

#1356

APPENDIX B

SUMMARY OF THE 1984 SAFE DRIVER PLAN

Exhibit 1	November 2, 1983 memorandum from the Commissioner's office summarizing the "salient features" of the 1984 Safe Driver Plan (SDIP)
Exhibit 2	November 29, 1983 memorandum from Commissioner Hiam altering the SDIP's treatment of inexperienced operators
Exhibit 3	Examples of the assignment of points under the SDIP

PETER HIAM
MMISSIONER OF INSURANCE

The Commonwealth of Massachusetts

Division of Insurance
100 Cambridge Street, Boston 02202

APPENDIX B
Exhibit 1
Page 1

The following contains the salient features of the new Safe Driver Insurance Plan for use in 1984. In addition to fulfilling the statutory mandate of Chapter 241 of the Acts of 1983, the provisions of this Plan have been devised to facilitate a fair and equitable transition from the Merit Rating program and to take into account notice given to all policyholders in 1983. This plan will be published in regulatory form in the near future. However, in order to expedite the 1984 Automobile Rate Hearing and the implementation of this Plan, the following is presented:

1. THE PREMIUM ADJUSTMENT

A Safe Driver Premium Adjustment will computed by the Insurer for policies subject to the Safe Driver Insurance Plan. This adjustment will be based on the Unsafe Driver Points and Credit Status assigned by the Merit Rating Board to the listed operators.

1.1 Policies Eligible for Premium Credits.

A policy is eligible for Premium credits if all of the four following conditions are true:

(1) No operator listed on the most recent application and the subsequent Merit Rating Inquiry for the policy has Unsafe Driver Points greater than zero.
(2) No operator listed on the most recent application and the subsequent Merit Rating Inquiry for the policy has Safe Driver Offenses in the 3-year policy experience period.
(3) No operator listed on the most recent application and the subsequent Merit Rating Inquiry for the policy is classed as an inexperienced operator as defined as having less than three years of driving experience.
(4) One operator listed on the most recent application and the subsequent Merit Rating Inquiry for the policy has a valid Massachusetts driver's license.

1.2 The Premium Credit Factors

A Credit Factor, expressed as a percentage of premium will be established by the Insurance Commissioner at the same time automobile insurance rates are established pursuant to Chapter 175, section 113B.

1.3 The Premium Credit Amount

The Premium Credit Amount for each vehicle covered by a policy is computed by multiplying the Premium Credit Factor times the Property Damage Liability premium for the class and territory of the policy.

1.4 Policies Subject to Premium Surcharges

A policy is subject to Premium Surcharge if a listed operator has one or more Unsafe Driver Points.

1.5 Premium Surcharge for Single Vehicle Policies

The Premium Surcharge for a single-vehicle policy will be computed using the number of Unsafe Driver Points of the listed operator with the highest number of points and will not reflect the points of any other listed operator.

In the case of multi-operator policies, the listed operator with the highest number of points will only be charged for those points once within any policy year. Reconciliation of discrepancies that may arise must be settled by insurers and their agents although the Board will assist in this area.

1.6 Premium Surcharge for Multi-Vehicle Policies

The Premium Surcharge for the first vehicle on the Policy is computed using the Unsafe Driver Points of the operator with the highest number of Unsafe Driver Points. For each subsequent vehicle the Unsafe Driver Points of the remaining listed operator with the highest number of Unsafe Driver Points is assigned until all vehicles are exhausted.

If there are more vehicles than operators, the Premium Surcharge for each additional vehicle after the last operator will be zero and the vehicle will not be credit eligible.

In the case of multi-operator and/or multi-vehicle policies, listed operators will only be charged for points once within any policy year. Reconciliation of discrepancies that may arise must be settled by insurers and their agents although the Board will assist in this area.

1.7 Schedule of Unsafe Driver Points

The Commissioner shall establish a schedule of Unsafe Driver Points for each surchargeable incident. Points will be totaled on a per operator basis for incidents within the experience period of the policy. See Exhibit 1 for the schedule, which includes "aging".

1.8 Premium Surcharge Amount

The Commissioner shall assign dollar values to Unsafe Driver Points which may vary according to the number of points irrespective of the class and territory of the policy.

1.9 Special Rating Cases

The Safe Driver Insurance Plan premium adjustments will be handled in the same manner and method as any other premium for the purpose of short rating, or pro rating of a policy, payment of commission or cancellation of the policy.

2. UNSAFE DRIVER POINTS

2.1 Unsafe Driver Points for a Listed Operator.

The number of Unsafe Driver Points for a listed operator is the sum of the points for each moving traffic violation and each at-fault accident within the 3 year policy experience period. (See Exhibit 1).

2.2 Comprehensive Unsafe Driver Points for a Listed Operator.

The number of Comprehensive Unsafe Driver Points for a listed operator is the sum of the points for each chargeable comprehensive claim within the 3-year policy experience period.

2.3 Surcharges Paid Under the Merit Rating Plan.

The number of Unsafe Driver Points for a moving traffic violation or at-fault accident for which surcharges were paid under the Merit Rating Plan will be computed by multiplying the percent of Merit Rating surcharges not paid by the maximum number of Unsafe Driver Points for the traffic violation or at-fault accident. (Example: A 2 point incident where 50% of the maximum surcharge has been prepaid would be valued at one point).

3. REFUNDS OR REVERSED INCIDENTS

3.1 Refunds of Incidents Reported Under the Merit Rating Plan.

There will be refunds for incidents reported and billed under the Merit Rating Plan that are subsequently reversed by the Superior Court or the Board of Appeal. Policies will re-rated when incidents have been reported and billed under the Safe Driver Insurance Plan that are subsequently reversed by the Superior Court or the Board of Appeal.

3.2 Refunds of Incidents Reported Under the Safe Driver Insurance Plan (Policies Effective 01-01-84 and after).

Policies will be re-rated when incidents have been reported and billed under the Safe Driver Insurance Plan that are subsequently reversed by the Superior Court or the Board of Appeal.

Peter Hiam
Commissioner of Insurance

November 2, 1983

Surcharge Type	Unsafe Driver points for each incidents after 1/1/84	Point Aging Factor
At-Fault Accidents		
Major A claim payment, for collision, limited collision or property damage liability exclusive of any deductible, of greater than $500.	3	Subtract 1 point for each subsequ year that no surchargeable inciden have occurred in; no value ever to less than zero.
Minor	2	
A claim payment for collision, limited collision or property damage liability exclusive of any deductible of greater than $200 but less than or equal to $500. The minor category includes accidents which occurred under the Merit Rating Plan. Surcharges which were fully paid under the Merit Rating Plan will not receive unsafe driver points. Surcharges which were partially paid will receive the point value shown above adjusted in proportion to past payment.		
Moving traffic violations		
Major (Vehicular Homicide, Driving Under the Influence and Driving to Endanger)	4	None
- The major category includes all violations which occurred under the Merit Ratng Plan categorized as DI and DE. Surcharges which we fully paid under the Merit Rating Plan will not receive unsafe driver points. Surcharges which were partially or not paid will receive the point value shown above adjusted in proportion to payment.		
Minor	1	Subtract 1 point for each subseque year that no surchargeable inciden have occurred in; no value ever to less than zero.
- The minor category includes all violations which occurred under the Merit Rating Plan categorized as "OT". Surcharges which were fu paid under the Merit Rating Plan will not receive unsafe driver points. Surcharges which were partially paid or not paid will receive t point value shown above adjusted in proportion to past payment.		
Comprehensive Claims each additional claim payment after 3 claims totalling $2,000 which have occurred within a 3 year period.	to be determined	to be determined

EXAMPLE, OPERATOR UNSAFE DRIVER POINTS

POLICY EFFECTIVE: 1-1-84, one operator, one vehicle
DRIVING HISTORY:

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	PAID	SAFE DRIVER POINTS MAX	ASSIGNED
OT Minor Moving Traffic Violation	04-01-83	04-30-83	25	0	1	1

Operator's Safe Driver Points, 1984 policy = 1

During the next year the same operator has another offense as oultined below. When the policy renews in 1985, the following points will be assigned:

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	PAID	SAFE DRIVER POINTS MAX	ASSIGNED
AC, Major Accident	03-01-84	03-15-84	-	-	3	3

Operator's Safe Driver Points, 1985 policy = 4

If the operator had not had any incident in 1984, the operator Unsafe Driver Points would have been zero as a one point credit for a surcharge free year of driving would have been applied. Individuals who continue to have surchargeable incidents will not receive point credits under the Safe Driver Insurance Plan.

PETER HIAM
MISSIONER OF INSURANCE

The Commonwealth of Massachusetts

Division of Insurance
100 Cambridge Street, Boston 02202

O: Parties to the 1984 Automobile Rate Hearing (Docket No. R83-7-3)

ROM: Commissioner Peter Hiam P.H.

E: Clarification of Safe Driver Insurance Plan - Inexperienced Operators

ATE: November 29, 1983

On November 2, 1983, in the course of the 1984 Automobile Rate Hearing, issued an outline of the salient features of the New Safe Driver Insurance lan. Section 1.1 lists four conditions which must be met before a policy can e eligible for a credit under the Safe Driver Insurance Plan. This notice s to clarify Section 1.1(3) of the SDIP regarding the ineligibility for premium redits of policies covering inexperienced operators.

Section 1.1(3) appears to make all vehicles on a policy ineligible for a credit if there is any driver listed on the policy who has less than three years of experience. However, my intention is that the listing of an inexperienced driver or drivers on a policy should result in the denial of a credit only to those vehicles considered to be principally operated by a driver or drivers with less than three years of experience. For this I will use the same definitions for classifying vehicles as are used in the rate manual. Therefore, Section 1.1(3) is hereby amended to read as follows:

The vehicle insured by the policy is not rated as principally operated by an inexperienced operator(s) as defined as having less than three years of driving experience. In the case of multi-vehicle policies, only the vehicle(s) considered for rating purposes as principally operated by an inexperienced

operator(s) as defined as having less than three years of driving experience shall be ineligible for a credit based on this subsection. Specifically, any vehicle rated as either class 20 or class 25 is ineligible for a credit.

EXAMPLES

EXAMPLE 1: OPERATOR UNSAFE DRIVER POINTS
PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING (ALL SURCHARGES FULLY PAID)

EXAMPLE 2: OPERATOR UNSAFE DRIVER POINTS
NO PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING, INCLUDES AGING OF SURCHARGES

EXAMPLE 3: OPERATOR UNSAFE DRIVER POINTS
PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING (THE FORMULA)

EXAMPLE 4: OPERATOR UNSAFE DRIVER POINTS
PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING (COMPLICATED CASE)

EXAMPLE 5: PREMIUM ADJUSTMENT
FOR A ONE-CAR POLICY

EXAMPLE 6: OPERATOR UNSAFE DRIVER POINTS
MULTIPLE INCIDENTS WITHIN A YEAR OF EACH OTHER

EXAMPLE 1: OPERATOR UNSAFE DRIVER POINTS
PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING
(ALL SURCHARGES FULLY PAID)

A. POLICY INFORMATION = INSURANCE COMPANY = B
POLICY NUMBER = EXAMPLE 1
EFFECTIVE DATES: 01-01-84 to 01-01-85
COVERAGE = P.D. LIABILITY AND COLLISION

B. OPERATOR INFORMATION: SURNAME = MORAN DOB = 04-01-50
LICENSE NUMBER = 029356810 LICENSE STATE = MA

C. DRIVING HISTORY INFORMATION

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	MERIT RATING SURCHARGES PAID	UNSAFE DRIVER POINTS MAX	UNSAFE DRIVER POINTS ASSIGNED
OT - Merit Rating first offense	12-31-82	03-24-83	50	50	1	0.00
				TOTAL =		0.00

OPERATOR UNSAFE DRIVER POINTS ASSIGNED = 0

EXAMPLE 2: OPERATOR UNSAFE DRIVER POINTS
NO PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING
INCLUDES AGING OF SURCHARGES

A. POLICY INFORMATION: INSURANCE COMPANY = A
POLICY NUMBER = EXAMPLE 2
EFFECTIVE DATES: 01-01-84 TO 01-01-85
COVERAGE = P.D. LIABILITY AND COLLISION

B. OPERATOR INFORMATION: SURNAME = REED DOB = 03-02-50
LICENSE NUMBER = 012953221 LICENSE STATE = MA

C. DRIVING HISTORY INFORMATION

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	MERIT RATING SURCHARGES PAID	UNSAFE DRIVER POINTS MAX	UNSAFE DRIVER POINTS ASSIGNED
OT - Merit Rating first offense	05-20-81	09-20-81	25	0	1	0.00
OT - Merit Rating second offense	03-09-83	06-09-83	115	0	1	1.00
				TOTAL =		1.00

OPERATOR UNSAFE DRIVER POINTS ASSIGNED = 1

NOTE: The 1981 OT has aged to zero because no surchargeable incidents have occurred within one year of the surcharge date of this incident.

EXAMPLE 3: OPERATOR UNSAFE DRIVER POINTS
PRO-RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING
(THE FORMULA)

A. POLICY INFORMATION = INSURANCE COMPANY = A
POLICY NUMBER = EXAMPLE 3
EFFECTIVE DATES: 01-01-84 TO 01-01-85
COVERAGE = P.D. LIABILITY AND COLLISION

B. OPERATOR INFORMATION: SURNAME = REED. DOB = 03-02-50
LICENSE NUMBER = 012953221 LICENSE STATE = MA

C. DRIVING HISTORY INFORMATION

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	MERIT RATING SURCHARGES PAID	UNSAFE DRIVER POINTS MAX	UNSAFE DRIVER POINTS ASSIGNED
OT - Merit Rating first offense	05-20-83	09-20-83	25	15	1	0.40
OT - Merit Rating second offense	03-09-83	06-09-83	115	25	1	0.78
				TOTAL =		1.18

OPERATOR UNSAFE DRIVER POINTS ASSIGNED = 1

FORMULA:

POINTS ASSIGNED = MAX POINTS X (MAX-AMOUNT less AMOUNT PAID divided by MAX-AMOUNT)

FOR (1) ABOVE

$$\text{POINTS ASSIGNED} = 1 \times \frac{(25-15)}{25}$$

$$= 1 \times \frac{10}{25} = 0.40$$

FOR (2) ABOVE

$$\text{POINTS ASSIGNED} = 1 \times \frac{(115-25)}{115}$$

$$= 1 \times \frac{90}{115}$$

$$= 0.78$$

EXAMPLE 4: OPERATOR UNSAFE DRIVER POINTS PRO-RATING AND AGING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING (COMPLICATED CASE)

A. POLICY INFORMATION: INSURANCE COMPANY = B
POLICY NUMBER = EXAMPLE 4
EFFECTIVE DATES 01-01-84 to 01-01-85
COVERAGE = P.D. LIABILITY AND COLLISION

B. OPERATOR INFORMATION: SURNAME = AMES BIRTH = 02-25-50
LICENSE NUMBER = 010523980 LICENSE STATE = MA

C. DRIVING HISTORY INFORMATION

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	PAID	UNSAFE DRIVER POINTS MAX	ASSIGNED
DI MERIT RATING First Offense	11-28-80	12-01-80	200	0	0	0.00
DI MERIT RATING Second Offense	01-31-81	03-30-81	425	425	4	0.00
AC MERIT RATING First Offense	04-01-82	06-01-82	50	25	2	1.00
DE MERIT RATING First Offense	05-30-83	08-30-83	200	0	4	4.00
					TOTAL	5.00

OPERATOR UNSAFE DRIVER POINTS ASSIGNED = 5

Note: First DI is outside the experience period for the policy. The second DI is completely paid, thus no points are charged. The first Accident has not "aged" because there is a subsequent surchargeable incident within one year of the surcharge date of this incident. Fifty per cent of this surcharge is paid, thus only one point is charged. The last DE is charged at a full four points because no payment has been made. The total points for the operator is 5.

EXAMPLE 5: PREMIUM ADJUSTMENT FOR ONE-CAR POLICY

OPERATOR INFORMATION NAME	YEARS DRIVING EXPERIENCE	OPERATOR SAFE DRIVER POINTS ASSIGNED
John Doe (husband)	20	2
Mary Doe (wife)	20	0
John Doe, Jr. (son)	2	5

PREMIUM ADJUSTMENT FOR THE ONE CAR COMPUTED USING 5 POINTS.

Premium Adjustment, 5 Point Rate	$200
Actual PDL rate, Territory 1, Class 18	$161
Premium Adjustment	200
Total Premium	$361

Same example except Territory 23.
Premium adjustment does not change, only the base rate changes

Actual PDL, Territory 23, Class 18	$230
Premium Adjustment	200
	$430

PREMIUM ADJUSTMENT SHOULD A SECOND CAR BE ADDED, WHICH IS COMPUTED USING 2 POINTS.

Premium Adjustment, 2 Point Rate	$ 50
Actual PDL rate, Territory I, Class 10	80
Premium Adjustment	50
	$130

There would not be a premium adjustment for the third car as the remaining operator has no surcharges. This car would be rated at the class 10 rate. Note how the first vehicle has the inexperienced operator and is class 18 while the remaining vehicle(s) are rated at Class 10.

Note: All premiums shown above, including the 2 and 5 point rate, do not reflect actual insurance rates and are used for illustrative purposes only.

EXAMPLE 6: OPERATOR UNSAFE DRIVER POINTS NO PRO RATING OF POINTS FOR SURCHARGES PAID UNDER MERIT RATING, MULTIPLE INCIDENTS WITHIN A YEAR OF EACH OTHER

A. POLICY INFORMATION = INSURANCE COMPANY = A
POLICY NUMBER = EXAMPLE 6
EFFECTIVE DATES: 01-01-84 TO 01-01-85

SECOND POLICY
EFFECTIVE DATES = 01-01-85 TO 01-01-86

B. OPERATOR INFORMATION: SURNAME = REED. DOB = 03-02-40
LICENSE NUMBER = 012953221 LICENSE STATE = MA

C. DRIVING HISTORY INFORMATION

DESCRIPTION	INCIDENT DATE	SURCHARGE DATE	MERIT RATING SURCHARGES MAX	MERIT RATING SURCHARGES PAID	UNSAFE DRIVER POINTS MAX	UNSAFE DRIVER POINTS ASSIGNED
AC, Minor	4/1/83	5/15/83	50	0	2	2
AC, Major	1/1/84	2/20/84	-	-	- 2	3 5

NOTE: In 1985, the first incident (AC, Minor) has not aged because there has been a subsequent incident within one year of the surcharge date. (5-15-83 to 2-20-84). Individuals having multiple incidents within a year of each other will be charged the full point value of each incident until one year of surcharge free driving has lapsed.

DAVID I. LEWIS
DIRECTOR

The Commonwealth of Massachusetts

Motor Vehicle Insurance - Merit Rating Board
Room 300
150 Causeway Street, Boston, 02114

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APPENDIX B
Exhibit 3
Page 8

TO: Mass. Merit Rating Coordinators

FROM: Cynthia Connors, Assistant Director CC

DATE: November 10, 1983

RE: Typographical Error in November 2, 1983 Mailing

Please be advised that the October Company Statement mailed November 2, 1983 contains a typographical error within Item #2 entitled "Safe Driver Insurance Plan". The date the Board expects to respond to inquiries for the Safe Driver Insurance Plan was inadvertently stated as of December 1, 1984. It should read December 1, 1983.

Please also note that in Example #4, the surcharge date for the Driving to Endanger Merit Rating, First Offense, should be 5/30/83 instead of 8/30/83.

My apologies for any confusion this may have created.

CC:df

APPENDIX C

MERIT RATING BOARD DATA SPECIFICATIONS

Exhibit 1	November 10, 1983 Data Request
Exhibit 2	Merit Rating Board data description for preliminary tabulations provided on September 13
Exhibit 3	Merit Rating Board additional data description for tabulations provided on November 16 and 18.

MASSACHUSETTS AUTOMOBILE RATING AND ACCIDENT PREVENTION BUREAU
40 Broad Street, Boston, Massachusetts 02109
(617) 542-5080

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APPENDIX C
Exhibit 1
Page 1

November 10, 1983

Mr. David Lewis
Director
Merit Rating Board
150 Causeway Street
Boston, Massachusetts 02114

Dear Dave:

Safe Driver Insurance Plan
Data Request

As the various parties to the automobile rate hearing discussed with you on November 9, we urgently need a tabulation of Merit Rating Board data in order to evaluate, quantify, and recommend to the Commissioner the Safe Driver Insurance Plan surcharge and credit amounts for use on 1984 policies. In our collective opinion, the 1984 Rate Hearing cannot resume to consider the SDIP without this data.

Generally speaking, a data compilation of the type you provided to the parties on September 16 is required. The actual compilation you provided at that time is rendered obsolete now because of the many respects in which the promulgated SDIP differs from the hypothetical SDIP details that you had assumed. Specifically, the important differences include:

1) Point values assigned to each kind of surchargeable offense

Offense	Hypothetical Points used	Actual Decision Points
AC-minor	1	2
(AC-major)	2	3
DI, DE, (VH)	3	4
OT	1	1

2) "Aging" of point values for AC and OT incidents is included in the promulgated plan.

3) Assignment of certain kinds of policies to a "no-credit -no surcharge" status.

4) Treatment of multi-operator and multi-car policies.

5) Forgiveness of Merit Rating surcharge events for which the policyholder has paid (and partial forgiveness of partially paid surcharge events). This provision is required only during the period of transition from Merit Rating.

These changes require several alterations to the data you provided. The specifications for the data that all rate hearing parties request are as follows:

A. Data period. Policies effective in 1982, with AC incidents during the policy period recorded, and with all surchargeable incidents in each of the three prior years recorded. The process you used to create the policy exposure file for calendar year 1982 and to match accidents to the policy exposure file need no revision for present purposes.

B. Assignment of territory. No change required.

C. Assignment of class. One additional driver class is needed. This additional class is defined:
- All operators aged 23 years or older, and
- At least one operator aged 65 years or older

D. Determination of SDIP points for each operator based on the offenses in the three year experience period. This determination involves four steps: determine maximum assignable points for each incident; "age" each incident; "forgive" incidents to the extent the operator paid for them under the Merit Rating system; and calculate total SDIP points for the operator.

1. Maximum assignable points. Determined in accordance with the following:

OT	1
AC	2
DI, DE	4

2. "Aging" of incidents. The data file you will use to generate the requested data identifies only the total number of incidents which occurred in the first year prior to the policy effective date, the total number of incidents which occurred in the second prior year, and the total number of incidents which occurred in the third prior year; but the data file does not have individual incident information such as surcharge month and day. Therefore, the "aging" of incidents must be estimated.

The aging approximation method that is preferred by the technical staff of all parties is:

a. For each incident, select a random number between 1 and 365, and use this number to assign a date to the incident.

b. Apply the aging process as it will be applied in 1984 by the MRB using the assigned date as if it were the actual date.

In the event that this preferred method is not feasible, we have attached an alternative algorithm that uses only the "year" information that you have available.

3. Forgiveness of paid and partially paid incidents[1]. The Forgiveness procedure should be the one which will be actually implemented by the Merit Rating Board for 1984 policy inquiries. An algorithm to approximate the forgiveness of paid and partially paid incidents is included as steps 5 and 6 in the alternative aging method attached. It may differ from the expected algorithm in an important way; namely it assumes that no MR surchargeable events from the first prior year will have been paid. If this assumption is not realistic, it should not be used.

4. Operator totals. Calculate the total of the final assigned SDIP points (after aging and forgiveness) for all incidents attributed to the operator.

E. Number of accident offenses in the three year period for the operator. No change in your procedure.

F. Number of accident claims during 1982 for the operator. No change in your procedure.

G. Determination of SDIP points for each policy. Assign to the policy the number of SDIP points for the operator with the greatest number of SDIP points.

H. Determination of accident offenses in the three year period for the policy. Assign to the policy the number of accident offenses during the three year period for the operator with the greatest number of SDIP points.

I. Determination of accident claims during 1982 for the policy. Assign to the policy the sum of the number of 1982 accident claims for all operators on the policy.

---

[1] In passing, we note that the three parties to the rate hearing, as represented at the 11/9/83 meeting, strongly oppose crediting each policyholder with having paid 20% more Merit Rating surcharge dollars than was actually paid. This approach, as you described it, clearly is inconsistent with the SDIP as promulgated. Furthermore, by decreasing the SDIP surcharge points, it will decrease the surcharge dollars generated by the system and thereby minimize the rate reduction to be credited to clean drivers. We plan to oppose, at the rate hearing, this approach you described for implementation. The forgiveness

(Footnote Continued)

J. Credit and No Credit/No Surcharge categories. In addition to categorizing policies according to 1, 2, 3, 4, 5, 6, 7, 8, and over 8 SDIP points, policies with zero points should be subdivided into two categories:

1. Credit-eligible policies. No operator on the policy has any surchargeable incidents in the three year experience period.

2. No credit - no surcharge policies. The policy is assigned zero SDIP points but at least one operator has a surchargeable incident in the three year experience period.

Additionally, it is our understanding that

- Other than the "aging" process, (which we did not fully discuss on November 9) the specifications listed above are feasible for incorporation in your computer programs.

- Unless we hear directly from you, we will assume that one or the other of our "aging" alternatives is feasible and will be implemented in the data request. Again, all parties prefer the"randomized date" approach.

- The data, both in the tape and paper form, can be prepared for delivery no later than November 18. (We will pick up our copy as soon as it is ready.)

- Following production of the above-specified data, you will produce on an expedited basis the one other variation suggested in the Bureau's 11/7/83 draft data specifications; namely no "forgiveness." This should be implemented by applying a uniform "forgiveness factor" of 1 to all incidents. In addition, also on an expedited basis, you should produce data similar to our principal data request above but with each operator treated as a separate policy.

(Footnote Continued)
algorithm presented here includes the 20% adjustment, and should be altered accordingly if your 20% adjustment is eliminated or revised.

If any of these specifications need clarification, feel free to contact
Richard Derrig 542-5080 (office)
401-861-2855 (home)

Very truly yours,

Robert F. Conger /lap

ROBERT F. CONGER
Vice President and Actuary

Richard A Derrig

RICHARD A. DERRIG
Mathematician

RFC/jkj/#1288
cc: Peter Hiam, Commissioner of Insurance
George D. Morison, President
Ronald Dennis, Actuarial Computer Specialist
Howard H. Mahler, Director, State Rating Bureau
Stefan Peters, Chief Actuary, State Rating Bureau
Robert MacNicholl, State Rating Bureau
Arthur English, Counsel, State Rating Bureau
Hilary Rowen, Esquire, Attorney General's Office
William DuMouchel, Consultant, Attorney General's Office
Scott P. Lewis, Esquire, Palmer & Dodge
Acheson H. Callaghan, Palmer & Dodge
Arthur Kreiger, Esquire, Palmer & Dodge

#1289

Alternative Algorithm for Calculating

SDIP Points Assigned to Each Operator

Inclusive of the Aging and Forgiveness Process

1. For each operator determine the total number of merit rating surchargeable incidents in each of the three years prior to the effective date of the policy. Label them as follows:

   n_1 = total number of MR surchargeable incidents in 1st year prior to effective date

   n_2 = total number of MR surchargeable incidents in 2nd year prior to effective date

   n_3 = total number of MR surchargeable incidents in 3rd year prior to effective date

2. For each of the above incidents calculate the maximum assignable points according to the following table:

Incident Type	Max. Assign Points
OT	1
AC	2
DI, DE	4

3. For each of the above incidents calculate an aging point deduction which will depend upon
   a) the prior year in which the incident occurred.
   b) the triple (n_1, n_2, n_3) of MR surchargeable events and
   c) the type of incident.

   Calculate this point deduction according to the following algorithm.

   A. For each incident within the 1st prior year, the aging point deduction is zero.

   B. For each DI and DE incident in any year, the aging point deduction is zero.

   C. For each AC and OT incident in either the 2nd prior year or 3rd prior year, the aging point deduction is chosen from the attached table according to the values of n_1, n_2, and n_3 for this operator.

4. For each incident subtract the calculated "aging point deduction" (Step 3) from the calculated "maximum assignable points" (Step 2) to arrive at the aged points for that incident. The minimum allowable value of the "aged points" is zero. The aged points will (generally) not be an integer valued; they should be kept unrounded.

5. For each incident determine a forgiveness factor as follows:

   A. For each incident in the 1st prior year the forgiveness factor is 1.

   B. For each incident in either the 2nd prior or 3rd prior years calculate a "forgiveness factor" as follows.

      i. If the total amount of paid MR surcharges on all incidents for this operator is zero, then the "forgiveness factor" is 1.

      ii. If otherwise, the "forgiveness factor" is calculated as

$$F = .8 - (X \div Y)$$ where

X = Total amount of paid MR surcharge dollars

Y = Total amount of maximum surcharge dollars due for incidents other than those in first prior year.

   The minimum allowable value of the "forgiveness factor" is zero.

6. For each incident the final SDIP assigned points is calculated by multiplying the "Aged Points" (Step 4) by the "Forgiveness Factor" (Step 5) and then rounding that result to the nearest integer value according to the rounding procedure expected to be used by the Merit Rating Board for 1984 policies.

7. For each operator add together all the final SDIP assigned points calculated for each of the MR surcharge incidents. (There should be $n_1 + n_2 + n_3$ point values to sum for each operator). This summed valued is the SDIP point value assigned to the operator.

8. Example Calculations

   The algorithm above (Steps 1-7) can be applied to the driving histories of the operators in the previously distributed (and attached) set of SDIP Examples.

Example 1

Step 1 Incidents	$n_1 = 1, n_2 = 0, n_3 = 0$	
2 Types/Max Pts	OT/1 point	
3 Aging Point Deduction	0	(Step 3A)
4 Aged Points	1	
5 Forgiveness Factor	1	(Step 5A)
6 Incident SDIP Points	1	
7 Operator SDIP Points[1]	1	

Example 2

Step 1 Incidents	$n_1 = 1, n_2 = 0, n_3 = 1$	
2 Types/Max Pts	OT/1 point, OT/1 point	
3 Aging Point Deduction	0 (Step 3A), 1.5	(Step 3C)
4 Aged Points	1 , 0	
5 Forgiveness Factor	1 (Step 5A), 1	(Step 5Bi)
6 Incident SDIP Points	1 , 0	
7 Operator SDIP Points	1	

---

[1]This outcome differs from the outcome of zero for the unsafe driver points assigned in the published example because the Merit Rating paid surcharges of $50 for a 3/24/83 incident on a 1/1/84 policy is inconsistent with the "forgiveness" algorithm above.

Example 3

Step 1	Incidents	$n_1 = 2$, $n_2 = 0$, $n_3 = 0$
2	Types/Max Pts	OT/1 point, OT/1 point
3	Aging Point Deduction	0 (Step 3A), 0 (Step 3A)
4	Aged Points	1 , 1
5	Forgiveness Factor	1 (Step 5A), 1 (Step 5A)
6	Incident SDIP Points	1 , 1
7	Operator SDIP Points[2]	2

Example 4

Step 1	Incidents	$n_1 = 1$, $n_2 = 1$, $n_3 = 1$		
2	Types/Max Pts	DE/4 points, AC/2 points, OT/1 Point		
3	Aging Point Deduction	0 (Step 3A or B),	.5 (Step 3C),	.83 (Step 3C)
4	Aged Points	4,	1.5,	.83
5	Forgiveness Factor	1 (Step 5A),	0,	0
6	Incident SDIP Points	4,	0,	0
7	Operator SDIP Points[3]		4	

---

[2] See previous footnote.

[3] This outcome differs from the outcome of 5 for the unsafe driver points assigned in the published example because the Merit Rating Board database for this exercise does not distinguish surcharge amount paid by incident, hence the forgiveness factor is calculated from the history of all incidents and is applied uniformly to all incidents exclusive of first prior year incidents.

Point Deduction Table for Alternative Aging Algorithm

Total Number of Incidents All Types) In Years Prior to Policy Year 1982			Points Deducted from each incident in 2nd Prior Year	Points Deducted from each incident in 3rd Prior Year
1st rior Year (n_1)	2nd Prior Year (n_2)	3rd Prior Year (n_3)		
0	0	0	0	0
0	0	1	0	2
0	0	2 or more	0	2
0	1	0	1	0
0	1	1	1	1
0	1	2 or more	1	1
0	2 or more	0	1	0
0	2 or more	1	1	1
0	2 or more	2 or more	1	1
1	0	0	0	0
1	0	1	0	1.5
1	0	2 or more	0	1.33
1	1	0	.5	0
1	1	1	.5	.83
1	1	2 or more	.5	.75
1	2 or more	0	.33	0
1	2 or more	1	.33	.58
1	2 or more	2 or more	.33	.47
2 or more	0	0	0	0
2 or more	0	1	0	1.33
2 or more	0	2 or more	0	1.17
2 or more	1	0	.33	0
2 or more	1	1	.33	.75
2 or more	1	2 or more	.33	.63
2 or more	2 or more	0	.17	0
2 or more	2 or more	1	.17	.47
2 or more	2 or more	2 or more	.17	.32

Notes:
1. The net points assigned to an incident, after the above point deductions, is not less than zero.
2. No deduction for aging of DI, DE incidents.
3. No deduction for aging of incidents in the most recent prior year.

MERIT RATING BOARD
SAFE DRIVER CLASSIFICATION DATA

Summary of Processing Steps

CREATE POLICY EXPOSURE FILE FOR CALENDAR YEAR 1982.

Inquiry responses and billing adjustments for policies with one or more days of coverage during calendar year 1982 are selected from the MRB BILLING HISTORY FILES. The selected MRB inquiry responses and billing adjustments are combined into one record for each operator for each policy. The one record for each operator contains the policy information, the operator identification and operator driving history data.

RECORDS:	6,072,921

SELECT AT-FAULT ACCIDENTS THAT OCCURRED DURING 1982 FROM MRB ACCIDENT FILE.

NUMBER 1982 ACCIDENTS:	170,474

MATCH ACCIDENTS WITH EXPOSURE FILE USING INVOLVED OPERATOR IDENTIFICATION.

An accident is assumed to match if the operator's ID and insurance company code from the accident notice match that of the exposure file, and the incident date of the accident is within the policy period.

ACCIDENTS IN:	170,474
ACCIDENTS MATCHED:	141,515
ACCIDENTS UNMATCHED OUT:	28,959

MATCH ACCIDENTS WITH EXPOSURE FILE BY POLICYHOLDER'S OPERATOR IDENTIFICATION.

An accident is assumed to match if the policyholder's operator ID and insurance company code from the accident notice match that of the exposure file, and the incident date of the accident is within the policy period.

	THIS STEP	CUMULATIVE
ACCIDENTS IN:	28,959	170,474
ACCIDENTS MATCHED:	17,948	159,463
ACCIDENTS UNMATCHED OUT:	11,011	11,011

MATCH ACCIDENTS WITH EXPOSURE FILE BY INSURANCE COMPANY AND POLICY NUMBER; COMBINE OPERATOR RECORDS INTO ONE RECORD PER POLICY.

	THIS STEP	CUMULATIVE
ACCIDENTS IN:	11,011	170,474
ACCIDENTS MATCHED:	1,725	161,188
ACCIDENTS UNMATCHED OUT:	9,286	9,286

POLICY RECORDS:	4,167,758

MERIT RATING BOARD
SAFE DRIVER CLASSIFICATION DATA

Summary of Processing Steps

5. CREATE MRB SAFE DRIVER RATING TABLE FILE AND SUMMARY REPORTS.

SAFE DRIVER RATING TABLE FILE:

NUMBER RECORDS	8,166
TOTAL NUMBER ACCIDENT CLAIMS	161,188
TOTAL POLICY DAYS IN 1982	880,302,351

MERIT RATING BOARD
SAFE DRIVER CLASSIFICATION DATA

File Description

"MRB-RATE-TBL" SAFE DRIVER RATING TABLE FILE

The SAFE DRIVER RATING TABLE FILE contains one record for each entry, or cell, n a 6 x 28 x 10 x 5 x 3 table. A record is not created for an entry if both otal fields are zero. The records are organized in ascending sequence by the ecord identification key described below.

AGNETIC TAPE SPECIFICATIONS
- 9-track tape, 1600 BPI
- ASCII character set

ILE DEFINITION
- ANSI standard labels
- File Identifier is "MRB-RATE-TBL"
- Block contains 400 records
- Record contains 24 characters

RECORD DESCRIPTION

NBR	DATA ELEMENT DESCRIPTION	FROM	TO	LENGTH	CONTENTS
	RECORD IDENTIFICATION:				
1	Age Class based on ages of operators on the policy effective date.	1	1	1	1,2,3,4,5,6
2	Territory of the policy using the proposed 1984 Territory Table. Territory number 27 is used for location codes in error.	2	3	2	00 to 27
3	Number of Points based on the offenses within the 3-year experience period of the operators on the policy. Cap is 9.	4	5	2	00 to 09
4	Number of Accident Offenses within the 3-year experience period of the operators on the policy. Cap is 4.	6	6	1	0,1,2,3,4
5	Number of Accident Claims during calendar year 1982 for the policy. Cap is 2.	7	7	1	0,1,2
	TOTALS:				
6	Total Number of Accident Claims during calendar year 1982 for all policies included in the given record (cell or table entry).	8	13	6	
7	Total Policy Days Exposure during calendar year 1982 for all policies included in the given record (cell or table entry).	14	24	11	

MERIT RATING BOARD
SAFE DRIVER CLASSIFICATION DATA

Age Class Definitions

AGE CLASS NUMBER	DEFINITION
1	All operators 23 years and older
2	All operators 20 to 22 years
3	One or more operators 20 to 22 years, another 23 years or older
4	All operators 16 to 19 years
5	One or more operators 16 to 19 years, another 20 years or older
6	Operator date of birth not given

```
 FD  SAFE-DRIVER-RATE-TABLE
     RECORDING MODE IS DECIMAL HYPER DENSITY
     BLOCK CONTAINS 400 RECORDS
     RECORD CONTAINS 24 CHARACTERS
     LABEL RECORDS ARE STANDARD
     VALUE OF FILE-ID IS "MRB-RATE-TBL"
     DATA RECORD IS SDRTBL-REC.
 01  SDRTBL-REC.
     03  SDRTBL-KEY.
         05  SDRTBL-AGE-CLASS                  PIC 9.
         05  SDRTBL-TERRITORY                  PIC 99.
         05  SDRTBL-NBR-POINTS                 PIC 99.
         05  SDRTBL-NBR-ACCIDENT-OFFENSES      PIC 9.
         05  SDRTBL-NBR-ACCIDENT-CLAIMS        PIC 9.
     03  SDRTBL-TOTALS.
         05  SDRTBL-TOTAL-NBR-ACCIDENTS        PIC S9(6).
         05  SDRTBL-TOTAL-POLICY-DAYS          PIC S9(11).
```

MERIT RATING BOARD
SAFE DRIVER INSURANCE PLAN

Reports From Calendar Year 1982 Data

Explanatory Notes

1. DIFFERENCES FROM REPORTS PRODUCED ON 09-13-83

Some errors in the data were handled differently for these reports. This resulted in a change in total policy years exposure of 0.3% and in a change in Age Class for a few (6) policies.

2. TAPE RECORD DESCRIPTION CHANGES

Age Class field contents may be 1, 2, 3, 4, 5, 6 or 7.
Age Class 1: All operators 23 years and older, none over 64
Age Class 6: One or more operators 65 or older, none under 23
Age Class 7: Operator date of birth not given

Number of Points field contents may be 01 through 11.
Number of Points = 01: Policy is credit eligible
Number of Points = 02 through 11: Policy point values 00 through 09

3. RANDOM NUMBERS FOR AGING OF OFFENSES

Random numbers for aging of offenses were computed using a random number routine that generates integers in the interval:

$$[0,\ 2^{23} - 1]$$

Random numbers from 1 to 365 were computed by adding 1 to the remainder of dividing 365 into the number generated by the random number routine.

The random number routine was written for the RMV CDC 3500 computer using the theory and guidelines of D. E. Knuth. The method is sometimes called the mixed or linear congruential method. The function is of the form:

$$N_{i+1} = aN_i + c \quad \text{(modulo m)}$$

$m = 2^{23}$ for the CDC 3500 computer

According to Knuth's rules based on number theory, a and c should have the following properties:

1) a mod 8 = 5,
2) $(m / 100) < a < m - \sqrt{m}$,
3) the binary digits of a have no obvious pattern,
4) $(c / m) \approx (1/2) - (1/6)\sqrt{3}$,
5) c is an odd integer.

COMMONWEALTH OF MASSACHUSETTS

DIVISION OF INSURANCE

HEARING TO FIX AND ESTABLISH 1990 PRIVATE PASSENGER AUTOMOBILE INSURANCE RATES

DOCKET No. G89-20

FILING OF THE ATTORNEY GENERAL, THE MASSACHUSETTS AUTOMOBILE RATING AND ACCIDENT PREVENTION BUREAU AND THE STATE RATING BUREAU RELATING TO THE SAFE DRIVER INSURANCE PLAN

July 28, 1989

AFFIDAVIT OF ROBERT C. MACNICHOLL

I, Robert C. MacNicholl, depose and state as follows:

1. I am a Casualty Actuary with the State Rating Bureau of the Massachusetts Division of Insurance (SRB), 280 Friend Street, Boston, Massachusetts. My educational background includes a B.A. in mathematics from Merrimack College and a M.A. in mathematics from Wayne State University. I have passed three of the actuarial exams given by the Casualty Actuarial Society. I have been in my present position since October 1981 and have participated in and testified before the Commissioner of Insurance in the rate hearings to set private passenger automobile rates for 1983, 1984, 1985, 1986, 1987, 1988 and 1989.

2. I participated on behalf of the SRB, together with the Massachusetts Attorney General and the Massachusetts Automobile Rating and Accident Prevention Bureau (MARB), in the development of the attached "1990 Massachusetts Private Passenger Automobile Safe Driver Insurance Plan" (1990 SDIP).

3. The parties designed the 1990 SDIP to be adequate, fair and consonant with the mandates and objectives of the law. To

the best of my knowledge and belief, the data and calculations leading to the final text of the plan are complete and accurate. Accordingly, the SRB recommends that such a plan be adopted by the Commissioner of Insurance as the official 1990 Massachusetts Private Passenger Safe Driver Insurance Plan.

Signed under the pains and penalties of perjury this 27th day of July of 1989.

Robert C. MacNicholl

AFFIDAVIT OF ALAN M. ZASLAVSKY

I Alan M. Zaslavsky, depose and state as follows:

1. I am an independent statistical consultant employed by the Attorney General's Office. My residence and place of business are at 149 Prospect Street, Cambridge, Massachusetts. My educational background includes a B.A. from Harvard College in 1969, a M.S. from Northeastern University in 1984 and a Ph.D. in Applied Mathematics (Statistics specialty) from the Massachusetts Institute of Technology in 1989.

I performed statistical analysis on the SDIP and participated in preparing the Attorney General's SDIP filings for 1987, 1988 and 1989 rates. I also performed statistical analysis and participated in preparing the State Rating Bureau's filings on Experience Rating in Medical Malpractice Insurance for 1987, 1988 and 1989 rates.

2. I participated on behalf of the Attorney General's Office, together with the State Rating Bureau and the Massachusetts Automobile Rating and Accident Prevention Bureau (MARB), in the development of the attached "1990 Massachusetts Private Passenger Automobile Safe Driver Insurance Plan" (1990 SDIP).

3. I am specifically responsible for the text of the Technical Appendix and Exhibits 1-7 of the 1990 SDIP filing.

4. The parties designed the 1990 SDIP to be adequate, fair and consonant with the mandates and objectives of the law. To the best of my knowledge and belief, the data and calculations leading to the final text of the plan are complete and accurate. Accordingly, the Attorney General recommends that such a plan be adopted by the Commissioner of Insurance as the official 1990 Massachusetts Private Passenger Safe Driver Insurance Plan.

Signed under the pains and penalties of perjury this 26 day of July of 1989.

Alan M. Zaslavsky

0889I

AFFIDAVIT OF HOWARD C. MAHLER

I, Howard C. Mahler, depose and state as follows:

1. I am Vice President and Actuary of the Massachusetts Rating Bureaus, 40 Broad Street, Boston, Massachusetts. My educational background includes a Bachelor's degree in mathematics from Queens College, New York, New York in 1972, and a Master's degree in mathematics from Princeton University in 1976. I am a Fellow of the Casualty Actuarial Society and a Vice-Chairman of the Casualty Actuarial Examination Committee; I am also a member of the American Academy of Actuaries. I have published several papers in the Proceedings of the Casualty Actuarial Society. Prior to my employment with the Massachusetts Rating Bureaus in 1984, I was an independent actuarial consultant; Director of the State Rating Bureau from 1981 to 1984; Actuary with the State Rating Bureau from 1980 to 1981; and Actuary with the Continental Insurance Company, New York, New York from 1977 to 1980. I have previously participated in and testified before the Commissioner of Insurance in numerous rate proceedings, including the following: private passenger automobile (1981, 1982, 1983, 1984, 1986, 1987, 1988, 1989), worker's compensation (1982, 1983, and 1987).

2. I participated on behalf of the Massachusetts Automobile Rating and Accident Prevention Bureau (MARB),

together with the Massachusetts Attorney General and the State Rating Bureau, in the development of the attached "1990 Massachusetts Private Passenger Automobile Safe Driver Insurance Plan" (1990 SDIP).

3. I am specifically responsible for Exhibits 8a-8d of this 1990 SDIP filing.

4. The parties designed the 1990 SDIP to be adequate, fair and consonant with the mandates and objectives of the law. To the best of my knowledge and belief, the data and calculations leading to the final text of the plan are complete and accurate. Accordingly, the MARB recommends that such a plan be adopted by the Commissioner of Insurance as the official 1990 Massachusetts Private Passenger Safe Driver Insurance Plan.

Signed under the pains and penalties of perjury this 27th day of July of 1989.

Howard C. Mahler

Howard C. Mahler

0884I

1990 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan
Summary of Recommendations

This filing represents the recommendations of the MARB, the Attorney General and the SRB, for the Safe Driver Insurance Plan ("Plan"). In accordance with the Sections 38 of c. 273 of the Acts of 1988 the plan for 1990 will take on a different form from the plan currently in use.

Due to the extent of the changes, the need to promote the new system, and the technical aspects of balancing the "charges" to "bad" drivers with the "credits" to "good" drivers, it is necessary that a decision be made as early as possible on the structure of this new plan. In order to facilitate the hearing process, the SRB, the Attorney General and the MARB have agreed on the plan described below.

The Current SDIP Plan

The current plan allows for 13 driver categories, 3 of which give credits to drivers who have had clean records for 3, 4 or 5 years; 9 are for drivers who have accumulated points for driving incidents and have to pay a surcharge based on their total points; and one category is for inexperienced clean drivers, drivers whose incidents have aged, or first time minor offenders who neither receive a credit nor pay a surcharge.

Driving incidents are assigned point values (from 1 to 4) based on the seriousness of the incident. Incidents classified

as "Minor Moving Violations" are assigned one point; incidents classified as "Minor At-Fault Accidents" receive two points; incidents classified as "Major At-Fault Accidents" receive three points; and incidents classified as "Major Moving Violations" incur the harshest penalty, four points. The last category is further penalized under the current plan by maintaining the 4 points for a 3 year period, while each of the other categories has its point value reduced by 1 point for each incident free year.

Credits, given to drivers with clean records for 3,4 or 5 years, are a percentage of the total Property Damage Liability rate subject to a maximum (cap) amount.

The Reform Law

Section 38 of c. 273 of the Acts of 1988, the auto insurance reform law, eliminated the prior restriction on using incidents more than three years old to determine surcharges and credits. Under c. 273, the SDIP can reward longer periods of incident-free driving. Such surcharge and credit systems - called "bonus/malus" plans - are common in Europe. Bonus/malus plans are perceived as creating significant incentives for safer driving and for the resolution of small claims outside the insurance system.

The Plans Analyzed by the Parties

In order to conform to the reform law, several "bonus/malus" systems have been considered for 1990 by a joint working group of the AG, MARB and SRB. Under this type of plan

"incidents" result in movement to higher premium levels and clean years result in movement to lower premium levels. The parties have established data definitions to permit the analysis of up to 15 years of incident free driving. The analysis in this filing is based on five years of data, the most recent year being 1987. The 1990 SDIP will reflect the 1988 data and therefore will impose surcharges and credits based on six years of driving experience. The parties anticipate that an additional year of experience will be added each year until a maximum credit level is reached. It is anticipated that the maximum credit will be set at approximately ten incident-free years. The parties make no recommendations on this issue this year, since resolution of this issue is unnecessary at this time.

Data was requested from the Merit Rating Board to evaluate the following three schedules of steps

	Schedule of Steps		
	Plan A	Plan B	Plan C
Minor Traffic Law Violation	2	2	3
Minor At-Fault Accident	3	4	5
Major At-Fault Accident	4	6	7
Major Traffic Law Violation	5	8	10

Under all three plans a new driver enters the system at Step 15. Under each plan, a driver would move to a lower numbered step for each incident free year. In 1990 the lowest step number would be Step 9 for a driver with no incident in the last 6 years. Each incident would move a driver the number of steps specified under each plan to a higher premium step.

Choice of a Point Plan

The parties recommend the adoption of Plan A based on the goodness of fit of the three plans and the pure premium increments between point values, determined using Policy Year 1988 data compiled by the Merit Rating Board.

Two criteria were applied for choice of a point plan for the SDIP. The first criterion is the goodness of fit of linear surcharges and credits (equal increments per point). By this criterion, Plan A gives a slightly better fit than Plan B and both give better fits than Plan C.

The second criterion is the relative point values assigned to different types of incidents. The table below shows the indications (described further in the Technical Appendix) for the relative values of the different types of incidents under the various plans. (A single incident in a year has a net cost of an additional step for the loss of the clean-year step and this extra point has been counted in the table.)

Incident type	Indications	Plan A	Plan B	Plan C
Minor violation	3	3	3	4
Minor accident	4	4	5	6
Major accident	5	5	7	8
Major violation	6	6	9	11

Of the plans, Plan A is equal to the indicated ratio. By both of these criteria, Plan A is the preferred plan, but Plan B would also be acceptable.

For 1990 Plan A has a structure whereby the 6 year incident-free driver would be in Step 9; a new driver would be

in Step 15; a driver in the highest rated category would be in Step 35; and the average rated class would approximately correspond to Step 13. Thus under Plan A, a minor traffic violation would result in a Step 15 driver moving to Step 17, a Step 20 driver (a driver with previous surcharges) to Step 22, and so forth. (Because of the Buell Amendment, discussed at greater length below, a first minor, non criminal violation would not result in a surcharge, but would preclude a driver from moving into a higher credit class.)

Minor at-fault accidents, major at-fault accidents and major traffic law violations under Plan A would move drivers by 3, 4 and 5 steps respectively. Thus a driver with a DWI conviction would take 5 years to regain his pre-conviction status if he had no further incidents.

New drivers to Massachusetts, whether experienced or inexperienced, would start at Step 15 and move to a lower step with each year of incident-free driving. Drivers insured in Massachusetts for the past six years will be placed at the step determined by their surcharge points and incident-free years during that period as if they had entered the state six years ago at Step 15. Drivers insured in Massachusetts for less than six years will be treated in the same fashion based on their Massachusetts experience.

Terminology

The parties suggest that the different groups of drivers with a similar status under the SDIP be referred to as "steps". (Thus an entry level driver would be at Step 15. After one incident free year that driver would move to Step

14.) To refer to them as "classes" rather than "steps" would confuse them with driver classes.

The "excellent driver award" would be given to those insureds at the best possible step; for 1990 that is Step 9, or six years incident free.

The effect of 5 years of incident free driving, which is discussed below, is referred to as a "clean slate".

Selecting the Maximum Surcharged Step

If the new system is to have approximately the same number of drivers in its highest rated step as the current system has in its highest rated point value group, then Plan A would have to go up to Step 36, Plan B to Step 40 and Plan C to Step 49. The parties recommend that Plan A be capped at Step 35.

If the average compulsory surcharge per point level is set at $25, and the average collision surcharge per point level is set at $17, then, over the 22 classes which are above average, the average surcharge at the highest SDIP level would be about $720, compared with the current maximum surcharge of $1100. The overall effect of this structure would be to impose larger aggregate charges than in the past, however, because total points can only be reduced by one each year, so a person who neither reaches the highest or lowest class levels, nor has a 5 year incident free period as discussed below, will always be significantly worse than he would have been had a particular incident not occurred.

Pricing the Steps

There are three issues that must be resolved in determining the pricing of the credit and surcharge steps. These issues are (a) the coverages to which the surcharges and credits are applied, (b) whether surcharges and credits are flat dollars, percentages or capped percentages and (c) whether the steps should be constant increments.

Since the rates will be balanced by class/territory cell following the calculation of the SDIP, the method of determining credits and surcharges will affect the relative pricing of surcharges and credits in each cell, but will not cause a subsidy between cells.

Coverages

Currently, SDIP credits are a percentage of PDL premiums (including increased limits). We propose that SDIP surcharges and credits be a percentage of the premiums for the following major coverages, each of whose premium is separately stated on the insured's bill:

A-1
A-2 (including deductibles)
PDL (including increased limits)
Collision (including buybacks and waivers of deductible)

The first three, which are liability coverages, would have the same percentage applied to their premiums. Collision, which is an optional physical damage coverage, would have a separately determined percentage applied to its premium.

Structure of Surcharges and Credits

Given the wide variation in collision premiums by vehicle

price and model year, a percentage structure was the clear choice for collision.

For liability, the parties carefully studied three different structures: flat dollar amounts, percentages, and capped percentages. The flat dollar structure fit not quite as well to the observed loss experience as the percentage structure. While the percentage structure did not fit quite as well as a capped percentage structure,[1/] the difference between the credits and surcharges on the two structures were not large and affected relatively few insureds.[2/]

Thus the parties recommend a percentage credit and surcharge structure for both liability and collision.

Surcharge and Credit Increments

The parties determined that the indicated increments were approximately the same between adjacent steps over the range of steps. Having increments between steps of equal size is somewhat simpler. Therefore, the parties recommend this year that the increments between different steps be of equal size.

However, the liability and collision increments were indicated to be of significantly different sizes, when

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1/ A capped percentage, which uses two parameters rather than one, is generally between a flat and percentage structure.

2/ Under all of the tested structures, credits and surcharges will be balanced by class/territory cell. Therefore, no class/territory cell is adversely affected as a whole by the choice of structure.

expressed as a percentage of applicable premiums. For liability the indication is 7.4%. For collision the indication is 5.0%. Therefore, the parties recommend that separate percentages apply to liability and collision.

The parties recommend 7% between steps for liability and 5% between steps for collision.

The 5 Year "Clean Slate"

All the bonus/malus plans considered penalize incidents for a longer period than the current SDIP system. (Under the curent SDIP a driver is credit eligible after 3 years without an incident). Even under Plan A, the least penalty oriented plan considered by the parties, a driver with several major incidents will take nearly a decade to regain the pre-surcharge status. In order to encourage safer driving by drivers with prior surcharges, the parties recommend that drivers who have been incident-free for five years, but are at a step higher than Step 15, be moved to Step 15.

Buell Amendment

Whichever method is adopted, the Buell Amendment must be considered. Currently, no points are charged to a driver for a non-criminal, minor moving violation if it is the first traffic violation in the experience period. If this law carries over to the new system, it would appear that a driver would stay in his point class if he incurs his first moving violation in the experience period (currently 6 years), and it is a non-criminal, minor (two point) violation.

Reclassification of Incidents

Although the classifications of incidents can remain largely intact for the new plan, the parties recommend that several minor violations be shifted to the major violation category based on the single-incident pure premiums for these incidents. The parties recommend that following incidents could be considered for reclassification:

Code 4:	License Suspended
Code 7:	Leaving Scene of an Accident
Code 14:	Refusal to Submit to Officer

Code 10 (license restrictions) which has included losses comparable to the existing 4 point violations is not recommended for reclassification since it includes a heterogeneous group of offenses. (See Exhibit 9).

Several minor moving violations (Lane violations, Code 15; Improper Passing, Code 12; Minor Traffic Law Violation, Code 20) had indicated losses comparable to the Minor At-Fault Accidents. Since these were relatively infrequent citations, the parties do not recommend reclassification of these codes at this time.

Reconciliation of the SDIP

Each year the SDIP credits and surcharges are reconciled so that, if total credits given out are higher than surcharges collected, the difference can be loaded into the rates for the following year (or subtracted out if surcharges collected are higher than credits given out). This is an important aspect of the plan and should be continued in a similar manner as has been done in the past.

Balancing by Class/Territory Cell

When the exact parameters of the plan have been determined, the plan should be balanced by class/territory cell so that total premium by cell remains constant. This is the way the plan has been balanced in the past, with all the extra premium paid by those surcharged drivers in a class/territory cell going to those drivers in the same cell who received credits.

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Technical appendix – 1990 Experience Rating Plan

1. Description of data sets.

Two data sets were provided by the Merit Rating Board and were the basis of the analyses performed for design and pricing of the SDIP.

The Phase I dataset classified drivers with zero or one surchargeable incident(s) in the 5-year experience period by class, territory, type of incident, and number of clean years since the incident. The Phase II dataset classified all drivers by class, territory, SDIP point level, and whether or not the driver had an incident in the previous year. Four versions of the Phase II dataset were created, one for the old SDIP plan and one for each of the three proposals (Plans A, B and C).

In both data sets, for each cell the items provided were: exposures, total losses, number of incidents, and total of squared losses. These items were provided with reference to total at-fault losses and also with reference to collision losses. At-fault losses are defined as they have been traditionally in the SDIP, that is as 100% of A1, B (basic and increased), and PDL (basic and increased), plus 50% of A2 and Med. Pay and 66% of Collision losses. Losses in the collision part of the datasets are 100% of collision losses.

Cells with less than five years of exposure were deleted from the data sets used for analysis because in many cases these were believed to have been included in error in the company loss reports. (This operation had little effect on estimates of plan parameters but made the lack-of-fit estimates more stable.) Cells corresponding to invalidly recorded class, territory or SDIP level or out-of-state drivers were also omitted form the analysis. Liability at-fault losses were calculated by subtracting 66% of collision losses for a given cell from total at-fault losses.

2. Exposures by point level.

Exposures (in driver-years), cumulative exposures (added from the bottom up) and percent cumulative exposures were calculated for each of the four SDIP plans and are displayed in Exhibit 1.

SDIP level 9 in the old system (representing drivers with 9 or more points) has 0.33% of the exposures. This portion of the total exposures can be closely matched by setting the following ceilings on point totals under the various plans:

Plan A	36 points
Plan B	40 points
Plan C	45 Points

For comparability and realism, all models involving SDIP point levels were fitted using only drivers with up to the number of points in the above table, i.e. omitting approximately the worst 0.3% of drivers in number of SDIP points. Drivers with over the the maximum number of points are assumed to be as bad as the drivers just at the maximum.

3. General description of least-squares methodology.

The primary methodology used for estimating plan parameters was least-squares fitting. For any values of the model or plan parameters, the exposure-weighted mean of squared deviations between the observed pure premium for a cell and the pure premium predicted by the plan could be calculated. Least squares estimates of the parameters are those which make this quantity (the "Mean Squared Error" or MSE) as small as possible. The MSE or its square root (root-mean-square error or RMS error) are a measure of how close the plan or model comes to predicting the losses in each cell. (Due to the randomness in the occurrence and sizes of incidents, every plan will have some error.)

Least-squares estimation may be regarded as a generalization of calculation of weighted averages. For example, if every class-territory cell had the same point-level exposure distribution, the differentials by point estimated by least squares would be a weighted mean (average) of the corresponding differentials by class-territory cell. The least-squares estimates of differentials are equivalent to a more complicated weighting scheme when the exposure distributions vary from cell to cell.

As a check on the robustness of the results with respect to the fitting criterion, some comparisons were made between least squared error fits and least squared relative error fits, i.e. minimizing the mean of squares of error divided by prediction for each cell. The results were similar with the modified criterion.

The design of the plans considered was further constrained by the requirement that every class-territory cell should be in balance, so revenue would be transfered only between SDIP levels within a class-territory cell.

4. Single-incident driver analysis.

The Phase I dataset was used to estimate the effect on anticipated losses of the various types of incidents. Drivers with a single incident were used in this comparison to isolate the effects of each type of incident. Since most drivers have only one incident (or none at all), the results obtained here are directly applicable to the bulk of the drivers classified under the SDIP, and indicative for multi-incident drivers.

A model was fitted of the form $R_{cti} = a_{ct} + \delta_i$, where R_{cti} is the loss pure premium for class c, territory t, and incident type i, a_{ct} is a parameter for the class-territory corresponding to the pure premium for incident-free drivers, and δ_i is the additional pure premium for a driver with a single incident of type i. The codes for the various incidents are listed in Exhibit 2. The increments δ_i are tabulated in Exhibits 3a and 3b and shown graphically in Exhibits 3c and 3d. In the graphs, the vertical bars are one-standard-error error bars around the estimates (in some cases these are too short to distinguish from the plotting point). The lower labels are incident types and the upper labels are the current point classification of the incidents (0 = no incident). The incidents have been ordered by the magnitude of the associated pure premium. The graphs differ only in that on the second graph, the two highest-priced incident types are omitted to allow expansion of the vertical scale for clarity.

All of the incidents currently allocated 4 points are in the upper range of pure premium. A number of 1-point violations are also in that high range; these are incident types 4, 14, 7 and 10 (in descending order). In addition, several 1-point violations overlap into the range of the at-fault accidents; these are incident types 15, 12 and 20.

The exposure-weighted average pure-premium increment associated with each type of incident (by point class) is shown in Exhibit 3e: (1) under the present system, (2) after transfering incident types 4, 7 and 14 to the 4-point class, and (3) after transfering incident types 4, 7, 10 and 14 to the 4-point class. The approximate ratio of increments for the four classes is 3:4:5:6.

5. Aging of incidents.

Two analyses were performed relevant to the effect of aging of incidents. Using the Phase II datasets, a model was fitted to determine the difference in pure premium between drivers who were incident-free in the last year and those who had

an incident in the last year, controlling for class, territory, and SDIP point level. The results of this analysis are displayed in Exhibit 4. With every plan, the drivers with a clean last year had significantly lower losses than those who had an incident. Note that this difference persisted even though the drivers with a clean year had already had their points aged downwards for the clean year under the old plan.

Using the phase I dataset for drivers with a single incident, a model was fitted that predicted the loss pure premium as a sum of effects for class-territory cell, for type of incident, and for years since last incident. The following table shows the estimated effects (with standard errors) for each number of years for all at-fault losses and for collision losses only, where effects are relative to the driver with the oldest possible incident (five years old).

	EFFECT FOR YEARS SINCE LAST INCIDENT			
YEARS	ALL	S.E.(ALL)	COLLISION	S.E.(COL)
1	57.13	0.71	37.45	0.26
2	12.06	0.47	13.49	0.18
3	3.50	0.39	7.71	0.15
4	-3.59	0.36	-1.14	0.14
5	0.00	0.02	0.00	0.01

Again, there is a significant aging effect; the largest part of the aging appears to take place in the first two years after the incident.

5. Comparison of Plans A, B and C.

For each of the three plans A, B, C the corresponding portion of the Phase II dataset was used to compare the goodness of fit of the various plans to the data. For each plan, the between-cell weighted standard deviation (root mean square of variability from the statewide average) was calculated. Then an additive model was fitted of the form $R_{cts} = \alpha_{ct} + s\beta$, where R_{cts} is the predicted loss pure premium for class c, territory t, and SDIP point level s, α_{ct} is a parameter for the class-territory corresponding to the pure premium for drivers in the best SDIP point level, and β is the additional pure premium per SDIP point. This model was selected for this exercise because it is simple, without prejudicing the choice of the final model; similar results were obtained on this comparison with other reasonable models.

The comparison of the three plans is shown in the table below. Plan C had the

	Plan A	Plan B	Plan C
Between-cell Root mean Square	203.539	201.254	208.686
Additive-linear lack-of-fit Root mean Square	124.794	122.687	136.364
Root mean Square explained by model	160.793	159.533	157.971

largest degree of variability between cells, possibly because the number of cells with this plan was larger, with many small (and hence highly variable) cells at the highest point levels. However, the fit of cell pure premium to the model, as measured by mean squared error, was also the worst for Plan C. The amount of variability between cells explained by the model is greatest for Plan A, slightly less for Plan B, and least for Plan C. In other words, Plan A allows the greatest amount of discrimination between good and bad drivers within class-territory cells.

The remainder of the analysis will be restricted to consideration of variants of Plan A.

6. Linearity of SDIP effects.

The effects of SDIP points on expected losses are linear if (controlling for class-territory cell) the increment of expected pure premium is the same for each additional SDIP point. If the effect of SDIP points is the same additive effect in every class-territory cell, this corresponds to the model described in the previous section. However, any model under which the effect of each SDIP point (within a class-territory cell) is equal is linear in this sense, even if the increments in different cells vary according to some formula.

Perfect linearity could not be expected since each point level corresponds to a unique mix of drivers with particular combinations of clean years and incidents. Also, especially at the higher point levels, random variability will cause apparent deviations from linearity; thus, the credibility of the data must be taken into account in assessing the fit of linear models. On the other hand, a linear model has the virtue of great simplicity and credibility compared to one in which the effect for each point level is estimated separately.

A model was fitted to the Plan A total at-fault losses dataset of the form $R_{cts} = \alpha_{ct} + \beta_s$, where R_{cts} and α_{ct} are as in the last section and β_s is a distinct additive effect for each point level, with β_{10} (the effect for the best point level) set equal to 0. The estimated values of β_s with standard errors are shown in Exhibit 5a. The graph in Exhibit 5b shows the same data plotted against point level, with two-standard-error error bars, and a line for the linear fit derived in the preceding section. For the most part the error bars for the fitted effects by individual point level cross (or come close in dollar amount to) the line representing the fitted linear relationship.

Because each driver's rating will tend to range over adjacent point levels in the course of several years' experience, the fit of individual point level effects is less important to the equity of the plan than the overall fit of ranges covering several point levels. A plan which systematically overstated or understated the value of points in some range of point values could be unfair to whole groups of drivers. To look for this type of lack of fit, linear additive models of the type described in Section 5 were fitted to the at-fault liability losses for separate point ranges. The dollars-per-point effects in the various ranges were as follows:

Point range	Dollars per point
(All) 10-36 points	15.46
(Credit) 10-15 points	14.56
(Surcharge) 15-36 points	16.45
15-22 points	15.28
22-36 points	17.33

The indicated increment per point appears to be larger in the upper range of points and smaller in the lowest (credit) range. However, the magnitude of the differences is not very large; for example, for a 10-point driver the credit relative to the 15-point (manual) rate using the increment from combined point levels is only about $4.50 more than indications using the 10 to 15 point increments. At this time it does not seem compelling to make the increments per point smaller at the lower levels.

This question should be revisited in the future, since extension of the plan to more credit years as more experience is accumulated may be expected to make the indicated increment per point relatively even smaller on the credit side.

7. Severity and frequency components, and implications for age-symbol relativities.

The differences by SDIP level can be decomposed into components for severity and frequency. Such a decomposition is displayed in Exhibit 6, for total at-fault losses ("ALL") and for Collision losses only.

Severity does not vary greatly from the lowest to the highest SDIP level. The difference in severity between the lowest and highest level is around one-third of the average severity for each category of losses. Frequency, on the other hand, varies greatly. The difference in frequency between the lowest and highest level is nearly twice the average frequency for each category of losses. In other words, the greater losses for the drivers with worse experience are primarily due to increased frequency of incidents.

Focusing for the moment on collision losses, the data are consistent with the view that drivers at different SDIP levels have nearly the same pattern of loss amounts except that frequencies are higher at higher SDIP levels. If this is the case, it is plausible that drivers with vehicles that are more expensive to repair would have proportionally greater increments in collision loss pure premium than drivers with inexpensively-repaired vehicles. The ratio of the most extreme age-symbol relativities is about 7 to 1, an indication of the importance of this factor in setting collision premiums. Although we have no data speaking directly to the interaction of age-symbol relativities with the SDIP, the dominant role of frequency in collision SDIP pure premium increments strongly suggests that SDIP premium increments should be calculated as a percentage of collision manual premium (taking into account class, territory and age-symbol premium for that vehicle). It would be highly unfair, for example, to charge a Class 10, Territory 10 driver with a 1981 symbol 1 car (1989 collision premium $81) the same surcharge per point as a driver in the same class and territory with a 1990 Symbol 17 car (1989 collision premium $574).

8. Calculation of per-point SDIP increments.

In this section, it will be assumed that Plan A is being used, that the effect of SDIP points is linear (that is, surcharges/credits per point are equal for each point within a given class-territory cell, as in the model in Section 5), and that liability losses (i.e. at-fault losses excluding collision) are of interest in comparisons of the options. For reasons discussed in the preceding section, collision SDIP would be

calculated separately as a percentage of premium; the methods used here for estimating percentages would be used to determine this percentage.

Three options were considered for calculation of the per-point increment (surcharge or credit):

(1) Flat additive: increment is the same in every class-territory cell.
(2) Percentage: increment is a fixed percentage of total manual rates on some package of coverages (here assumed to be A-1, A-2, and PDL basic and increased limits for liability SDIP, and Collision for collision SDIP).
(3) Capped percentage: increment is calculated as a percentage of package manual rates, but if this exceeds a cap, the cap amount is used. Note that it is the *per-point increment* that is capped, not the total surcharge or credit.

The following gives the mathematical formulation of these plans and the methods of fitting them. The following symbols will be required:

$s=$ SDIP point level, with 0 representing the manual rate (15-point level under the systems described here)
$L_{cts}=$ losses for class c, territory t, SDIP level s,
$E_{cts}=$ exposure for class c, territory t, SDIP level s,
$R_{cts}=$ observed pure premium for class c, territory t, SDIP level s, $=L_{cts}/E_{cts}$
$R_{ct}=$ observed average pure premium for class c, territory t,
$R^*_{cts}=$ predicted pure premium for class c, territory t, SDIP level s,
$S_{ct}=$ exposure-weighted SDIP point average for class c, territory t,
$\alpha_{ct}=$ balancing constant for class c, territory t,
$A_{ct}=$ average package premium for class c, territory t,
$f=$ factor to rate level,
$\beta=$ per-point surcharge under flat plan, percentage per-point surcharge under additive plan.

Then the flat additive plan can be written as

$$fR^*_{cts}=\alpha_{ct}+s\beta, \text{ where } \alpha_{ct}=fR_{ct}-S_{ct}\beta$$

and the percentage model can be written as

$$fR^*_{cts}=\alpha_{ct}+s\beta A_{ct}/(1+S_{ct}\beta), \text{ where } \alpha_{ct}=fR_{ct}-S_{ct}\beta A_{ct}/(1+S_{ct}\beta).$$

The denominator in the percentage model converts the average class-territory package premium into the manual rate (15-point rate). The capped percentage model is a hybrid of the two models.

Note that the percentage and capped percentage models here fit percentages on a base of manual rates rather than pure premiums. This gives an element of flattening to the percentage plan compared to one based on pure premium, due to capping and the inclusion of flat-loaded components of premium; this flattening improves the fit of the percentage model. The class-territory average rates used here were calculated by taking 6-class 1989 rates from the 1989 decision, 100K Exhibit 19 pages 1, 2, 3, and 7, breaking them out to a nine-class basis with the applicable discounts and with exposures from the MRB Phase II data base, and finally adjusting them so that state-wide averages matched the state-wide collectible averages from the 1989 Decision, as follows:

A-1	$82.06
A-2	35.83
PDL - Basic and IL	154.98
Collision	310.91

The factor to rate level assumed was 1.6. This is slightly less than the factor calculated in the Attorney General's 1989 SDIP filing, and therefore makes the fitted values slightly conservative. (For the percentage plans this conservatism could be offset by increased overall rate levels.)

For both the flat and percentage plans, the objective of fitting was to minimize the exposure-weighted squared error of prediction,

$$\sum_{c,t,s}\left(R^{*}_{cts}-R_{cts}\right)^{2}E_{cts}$$

Equating the derivative with respect to β to 0, the optimal β for the flat plan could be calculated by iterating the following calculation:

$$\beta=\frac{\sum_{c,t,s} sE_{cts}\left(fR_{cts}-\alpha_{ct}\right)}{\sum_{c,t,s} s^{2}E_{cts}}$$

and recalculating α_{ct} at each iteration. Similarly, the optimal β for the percentage plan could be calculated by iterating the following calculations:

$$\beta=\frac{\sum_{c,t,s}\frac{s-S_{ct}}{(1+S_{ct}\beta)^{2}}E_{cts}f\left(R_{cts}-R_{ct}\right)}{\sum_{c,t,s}\frac{(s-S_{ct})^{2}}{(1+S_{ct}\beta)^{3}}E_{cts}A_{ct}}$$

There is no simple iterative algorithm for fitting the capped percentage plan. Instead the mean squared error was calculated over a grid of values for the percentage and cap, ranging upwards from the fitted values for the separate percentage and flat plans. (The percentage and cap for the combined plan will be larger than the corresponding quantities under either single plan since in the combined plan the minimum of the two is used.)

The following are the fitted values and mean squared error for each of the three increment formulae:

Formula	Fitted per-point increment	Mean squared error of fit (at pure-premium level)
Flat additive	$24.73	114.14
Percentage	7.4%	113.80
Capped percentage	7.6%, $33 cap	113.68

In terms of goodness of fit, the capped percentage plan is a very slight improvement over the percentage plan, which is a larger improvement over the flat additive plan. Under the capped percentage plan, 90% of the exposures are uncapped.

Note that the fitted parameters of the flat and percentage plans are consistent with each other, in the sense that $24.73 divided by the statewide average package premium of $272.87 is 9.06% as a percentage of average rate; the statewide average point level is 12.66 so this roughly corresponds to $9.06\%/(1+2.34\times 9.06\%)=7.47\%$, quite close to the fitted percentage rate.

The fitted percentage for the percentage plan for collision losses (with collision premium as the base) is 5.0%. For this calculation, only 2/3 of collision losses were counted as at-fault, as has been traditional in the definition of at-fault losses.

The percentage plan tends to overstate premium for some groups and understate it for some others. A summary of some of these effects can be found in Exhibit 7, which shows the average amount of overprediction (negative entries) or underprediction (positive entries) by the percentage SDIP plan for groups of class-

territory-point cells. In Class 30, the SDIP differentials generally appear to be smaller than predicted (because smaller than for comparable drivers in Class 10 or 15). Thus high-point drivers are overcharged and low-point drivers are undercharged. The same is true for Classes 17 and 18; in those classes, the premiums are relatively high but the SDIP differentials are not proportionately elevated. In the 0-3-year inexperience classes (20, 21, 25, and 26), on the other hand, the prediction errors are not large.

It must be emphasized that it may not be possible to eliminate these detail discrepancies at the detailed level without substantially complicating the structure of the plan. A number of possible further refinements could be considered, although they are not presented as serious alternatives at this time. There is some basis for applying different percentages in different classes. The following table shows the fitted percentages for an uncapped percentage plan applied to various subsets of the classes and territories. Use of different percentages by class would correct some of

Subset of drivers	Percentage
Classes 10, 15	7.6%
Classes 17, 18	5.8%
Class 30	3.3%
Classes 20, 21, 25, 26	7.3%
Territories 1-12	7.6%
Territories 13-26	6.6%

the discrepancies of fit noted in the last paragraph. Setting different percentages above and below 15 points would also improve the fit somewhat.

Exposures and cumulative exposures by SDIP points for Plans A, B, and C and 1989 plan.

1990 SDIP Ex 1

	Exposures A	Cum A	Cum % A	Exposures B	Cum B	Cum % B	Exposures C	Cum C	Cum % C
10	1223754	2257542	1.0000	1223754	2257555	1.0000	1223754	2257557	1.0000
11	15749	1033788	0.4579	15749	1033801	0.4579	15749	1033803	0.4579
12	17022	1018039	0.4510	17022	1018052	0.4510	17022	1018054	0.4510
13	289007	1001017	0.4434	289007	1001030	0.4434	20287	1001032	0.4434
14	158920	712010	0.3154	31382	712023	0.3154	294059	980745	0.4344
15	186906	553090	0.2450	266289	680641	0.3015	123234	686686	0.3042
16	89092	366184	0.1622	67729	414352	0.1835	128762	563452	0.2496
17	48282	277092	0.1227	66514	346623	0.1535	28272	434690	0.1925
18	47150	228810	0.1014	51068	280109	0.1241	112531	406418	0.1800
19	38517	181660	0.0805	37876	229041	0.1015	14206	293887	0.1302
20	24331	143143	0.0634	36484	191165	0.0847	36650	279681	0.1239
21	23126	118812	0.0526	22596	154681	0.0685	38122	243031	0.1077
22	17208	95686	0.0424	23859	132085	0.0585	36978	204909	0.0908
23	13824	78478	0.0348	16453	108226	0.0479	13313	167931	0.0744
24	11236	64654	0.0286	14301	91768	0.0406	21321	154618	0.0685
25	9162	53418	0.0237	12576	77467	0.0343	20241	133297	0.0590
26	7457	44256	0.0196	9215	64891	0.0287	12851	113056	0.0501
27	6195	36799	0.0163	8898	55676	0.0247	11125	100205	0.0444
28	5143	30604	0.0136	6760	46778	0.0207	11506	89080	0.0395
29	4137	25461	0.0113	6057	40018	0.0177	10174	77574	0.0344
30	3574	21324	0.0094	4899	33961	0.0150	6807	67400	0.0299
31	2834	17750	0.0079	4395	29062	0.0129	7138	60593	0.0268
32	2414	14916	0.0066	3593	24667	0.0109	7016	53455	0.0237
33	1965	12502	0.0055	2969	21074	0.0093	4842	46439	0.0206
34	1617	10537	0.0047	2509	18105	0.0080	4415	41597	0.0184
35	1414	8920	0.0040	2269	15596	0.0069	4597	37182	0.0165
36	1160	7506	0.0033	1880	13327	0.0059	3615	32585	0.0144
37	991	6346	0.0028	1568	11447	0.0051	3019	28970	0.0128
38	776	5355	0.0024	1360	9879	0.0044	2990	25951	0.0115
39	710	4579	0.0020	1190	8519	0.0038	2681	22961	0.0102
40	558	3869	0.0017	948	7329	0.0032	2071	20280	0.0090
41	473	3311	0.0015	888	6381	0.0028	1953	18209	0.0081
42	409	2838	0.0013	691	5493	0.0024	1776	16256	0.0072
43	343	2429	0.0011	665	4802	0.0021	1552	14480	0.0064
44	269	2086	0.0009	490	4137	0.0018	1335	12928	0.0057
45	269	1817	0.0008	563	3647	0.0016	1265	11593	0.0051
46	228	1548	0.0007	333	3084	0.0014	1004	10328	0.0046
47	181	1320	0.0006	407	2751	0.0012	999	9324	0.0041
48	152	1139	0.0005	236	2344	0.0010	885	8325	0.0037
49	139	987	0.0004	298	2108	0.0009	716	7440	0.0033
50	122	848	0.0004	189	1810	0.0008	686	6724	0.0030
51	81	726	0.0003	239	1621	0.0007	612	6038	0.0027
52	88	645	0.0003	144	1382	0.0006	543	5426	0.0024
53	76	557	0.0002	191	1238	0.0005	492	4883	0.0022
54	58	481	0.0002	102	1047	0.0005	408	4391	0.0019
55	58	423	0.0002	136	945	0.0004	392	3983	0.0018
56	62	365	0.0002	80	809	0.0004	363	3591	0.0016
57	34	303	0.0001	108	729	0.0003	311	3228	0.0014
58	35	269	0.0001	42	621	0.0003	295	2917	0.0013
59	35	234	0.0001	92	579	0.0003	227	2622	0.0012
60	199	199	0.0001	487	487	0.0002	2395	2395	0.0011

	Exposures (Old plan)	Cum old	Cum % old
C5	1320803	2257518	1.0000
C4	83342	936715	0.4149
C3	100533	853373	0.3780
0	415352	752840	0.3335
1	127149	337488	0.1495
2	97032	210339	0.0932
3	45219	113307	0.0502
4	30547	68088	0.0302
5	13404	37541	0.0166
6	8141	24137	0.0107
7	4836	15996	0.0071
8	3782	11160	0.0049
9	7378	7378	0.0033

TABLE OF INCIDENT INDEX VALUES
SDIP Incident Classification File

PHASE I Data Request

INCIDENT INDEX	Description
00	(operator has no incidents)
01	VEHICULAR HOMICIDE
02	DRIVING INTOXICATED
03	DRIVING TO ENDANGER
04	OPERATING WITH LICENSE SUSPENDED
05	OPERATING WITH LICENSE REVOKED
06	OPERATING ON BET OR WAGER
07	LEAVING SCENE OF ACCIDENT
08	IMPEDING EMERGENCY VEHICLE
09	SPEEDING
10	LICENSE RESTRICTION
11	FAILURE TO STOP
12	IMPROPER PASSING
13	UNREGISTERED VEHICLE OR IMPROPER EQUIPMT
14	REFUSAL TO SUBMIT TO POLICE OFFICER
15	LANE VIOLATION
16	NO INSPECTION STICKER
17	ONE WAY STREET
18	MINOR TRAFFIC LAW VIOLATION
19	FAILURE TO USE SAFETY
20	MINOR TRAFFIC LAW VIOLATION
21	LOSS AMOUNT 0 - 499
22	LOSS AMOUNT 500 - 749
23	LOSS AMOUNT 750 - 999
24	LOSS AMOUNT 1000 - 1499
25	LOSS AMOUNT 1500 - 1999
26	LOSS AMOUNT 2000 - 2999
27	LOSS AMOUNT 3000 - 4999
28	LOSS AMOUNT 5000 - 9999
29	LOSS AMOUNT OVER 9999

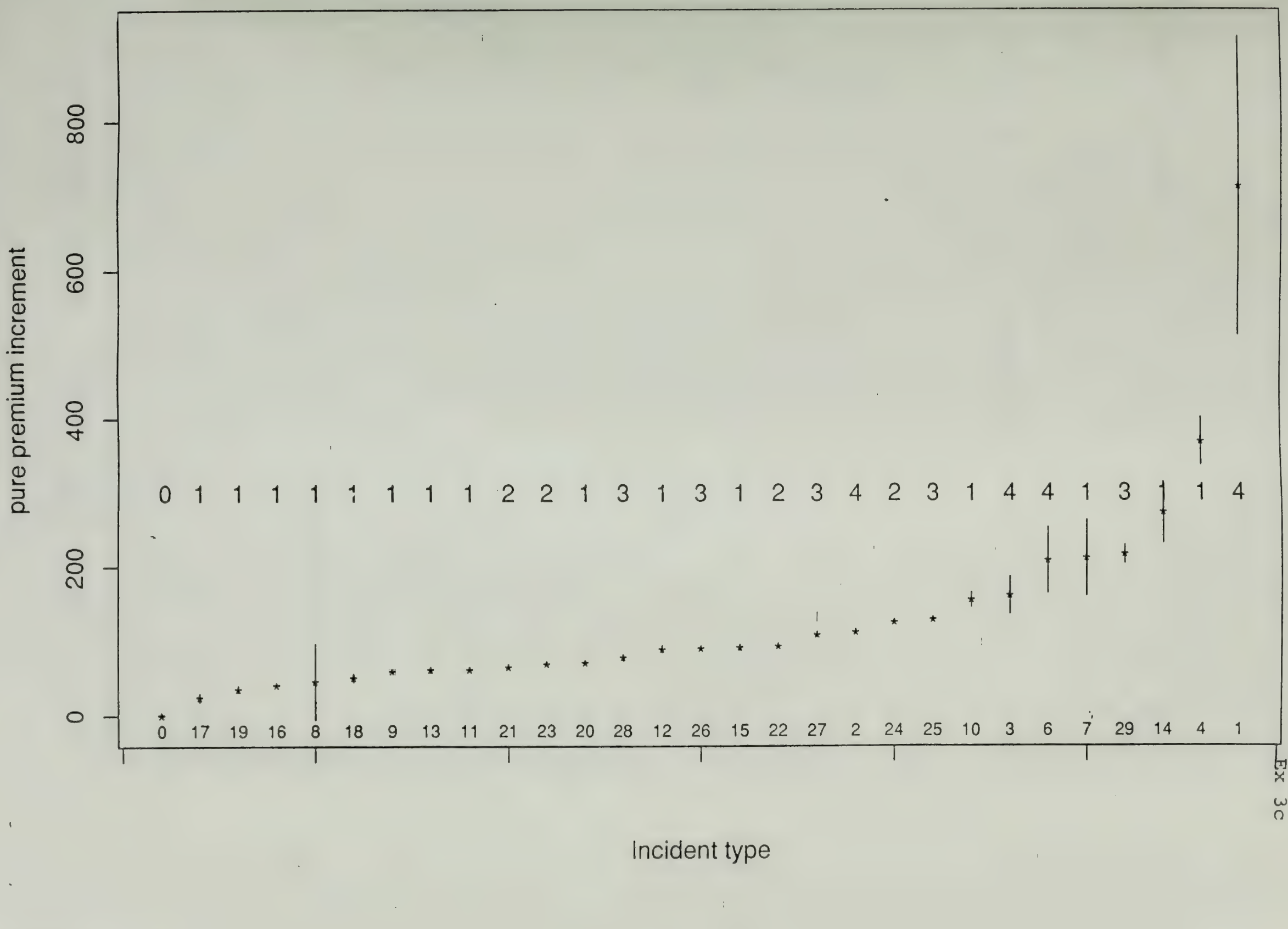
Pure premium increment (additive model) associated with single incident of various types
(Points are points under old system; incident type 0 = no incident; exposures are in driver-years.)

Inc.	Pure Prem	S.D.	Exposure	Points
0	0.00	0.15	1259504	0
1	712.24	201.10	11	4
2	112.07	2.26	9261	4
3	160.70	24.90	214	4
4	368.09	31.83	167	1
5	207.71	44.21	78	4
7	210.72	50.94	82	1
8	45.67	50.62	28	1
9	59.29	0.57	141231	1
10	154.88	9.78	1206	1
11	61.64	1.14	41584	1
12	89.12	4.77	3028	1
13	61.27	3.08	6926	1
14	272.47	41.27	132	1
15	91.51	3.53	4882	1
16	40.31	1.02	31550	1
17	24.17	5.91	1009	1
18	50.65	5.91	1406	1
19	35.21	4.40	2890	1
20	70.86	1.09	46112	1
21	65.00	0.71	73495	2
22	92.70	1.52	24224	2
23	69.18	1.66	16614	2
24	124.85	1.85	21186	2
25	128.67	2.52	12257	3
26	89.97	2.27	12715	3
27	108.38	3.02	8680	3
28	78.01	4.30	3946	3
29	216.29	12.15	764	3

Same arranged in order of pure premium

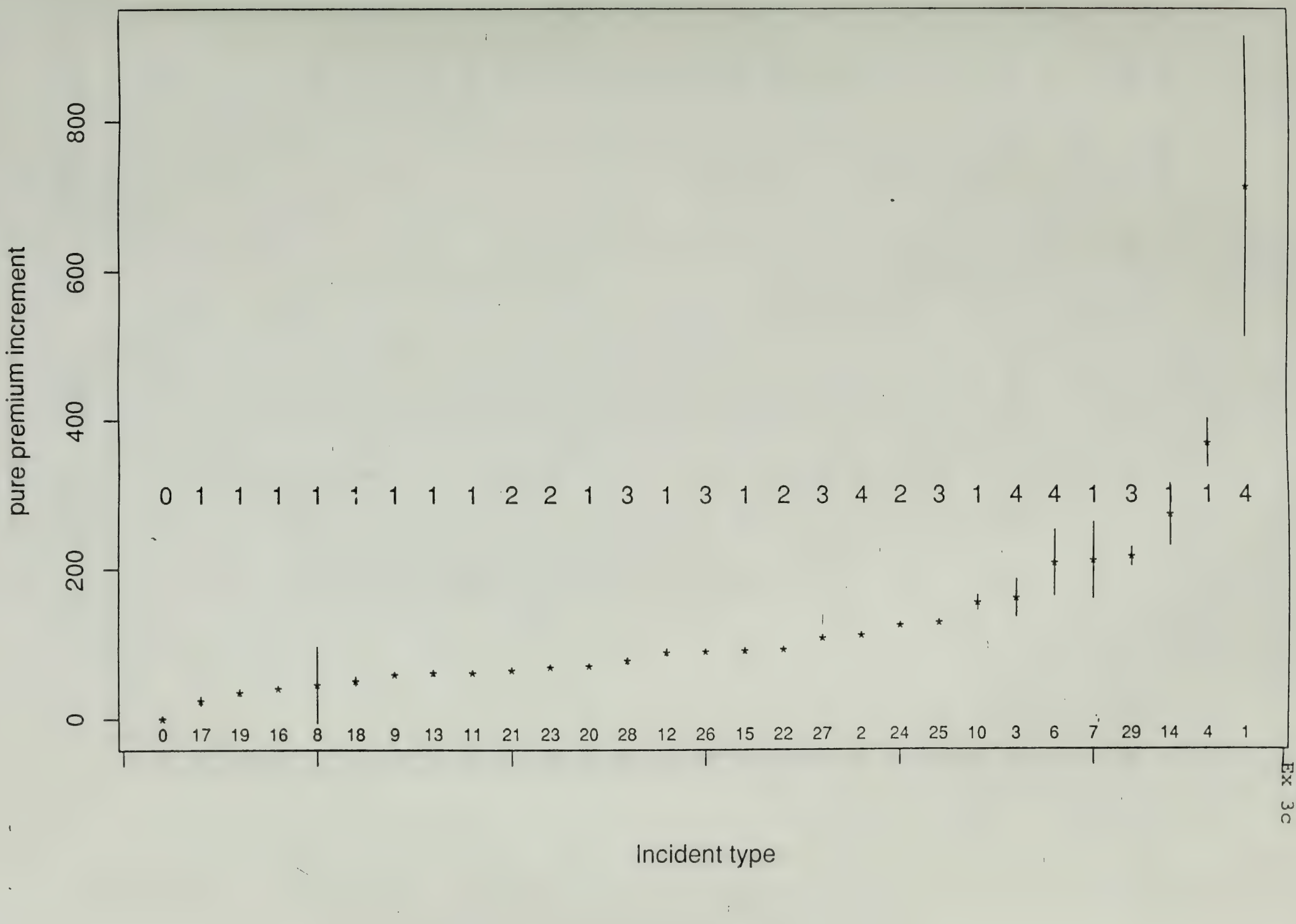
Inc.	Pure Prem	S.D.	Exposure	Points
0	0.00	0.15	1259504	0
17	24.17	5.91	1009	1
19	35.21	4.40	2890	1
16	40.31	1.02	31550	1
8	45.67	50.62	28	1
18	50.65	5.91	1406	1
9	59.29	0.57	141231	1
13	61.27	3.08	6926	1
11	61.64	1.14	41584	1
21	65.00	0.71	73495	2
23	69.18	1.66	16614	2
20	70.86	1.09	46112	1
28	78.01	4.30	3946	3
12	89.12	4.77	3028	1
26	89.97	2.27	12715	3
15	91.51	3.53	4882	1
22	92.70	1.52	24224	2
27	108.38	3.02	8680	3
2	112.07	2.26	9261	4
24	124.85	1.85	21186	2
25	128.67	2.52	12257	3
10	154.88	9.78	1206	1
3	160.70	24.90	214	4
5	207.71	44.21	78	4
7	210.72	50.94	82	1
29	216.29	12.15	764	3
14	272.47	41.27	132	1
4	368.09	31.83	167	1
1	712.24	201.10	11	4

losses associated with single incident



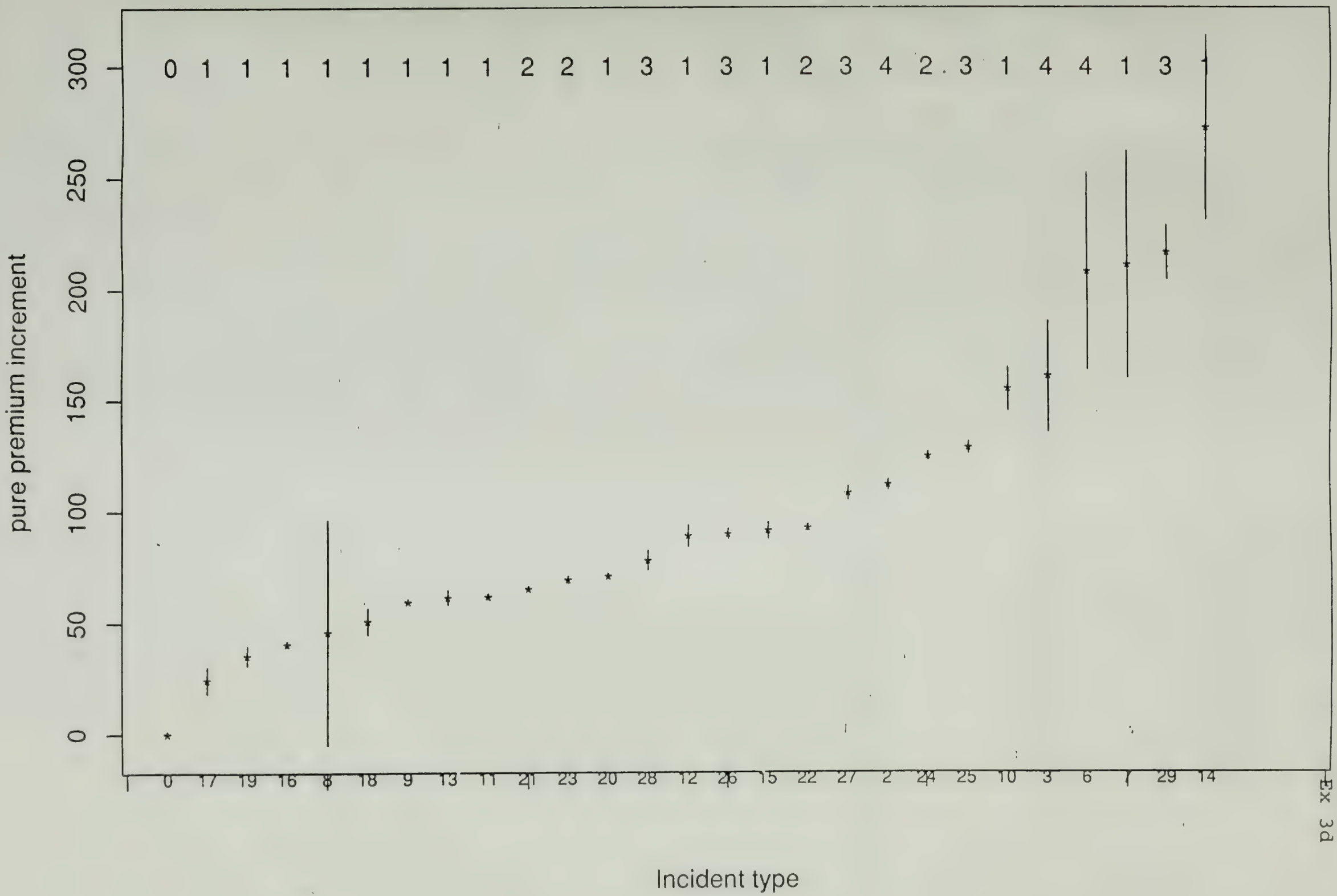
1990 SDIP Ex 3c

losses associated with single incident



1990
SDIP
Ex 3c

losses associated with single incident



1990
SDIP
Ex 3d

Exposure-weighted average pure-premium increment for each point type

Pts.	All	Collision
0	0.000	0.000
1	60.649	43.628
2	79.820	40.552
3	107.786	65.541
4	114.622	79.383

Same if incident types 4, 7, 14 are reclassified as 4-point incidents

Pts.	All	Collision
0	0.000	0.000
1	60.506	43.595
2	79.820	40.552
3	107.786	65.541
4	117.557	79.756

Same if incident types 4, 7, 10, 14 are reclassified as 4-point incidents

Pts.	All	Collision
0	0.000	0.000
1	60.101	43.241
2	79.820	40.552
3	107.786	65.541
4	121.655	86.558

Additive effect for having an incident in the previous year
(controlling for class, territory, and SDIP point level).

Set 1: 1989 SDIP plan
ALL :
delta(clean-incident last year)=-29.16, S.D.=0.23
COLLISION :
delta(clean-incident last year)=-16.73, S.D.=0.23

Set 2: Plan A proposal
ALL :
delta(clean-incident last year)=-56.52, S.D.=0.19
COLLISION :
delta(clean-incident last year)=-32.5, S.D.=0.2

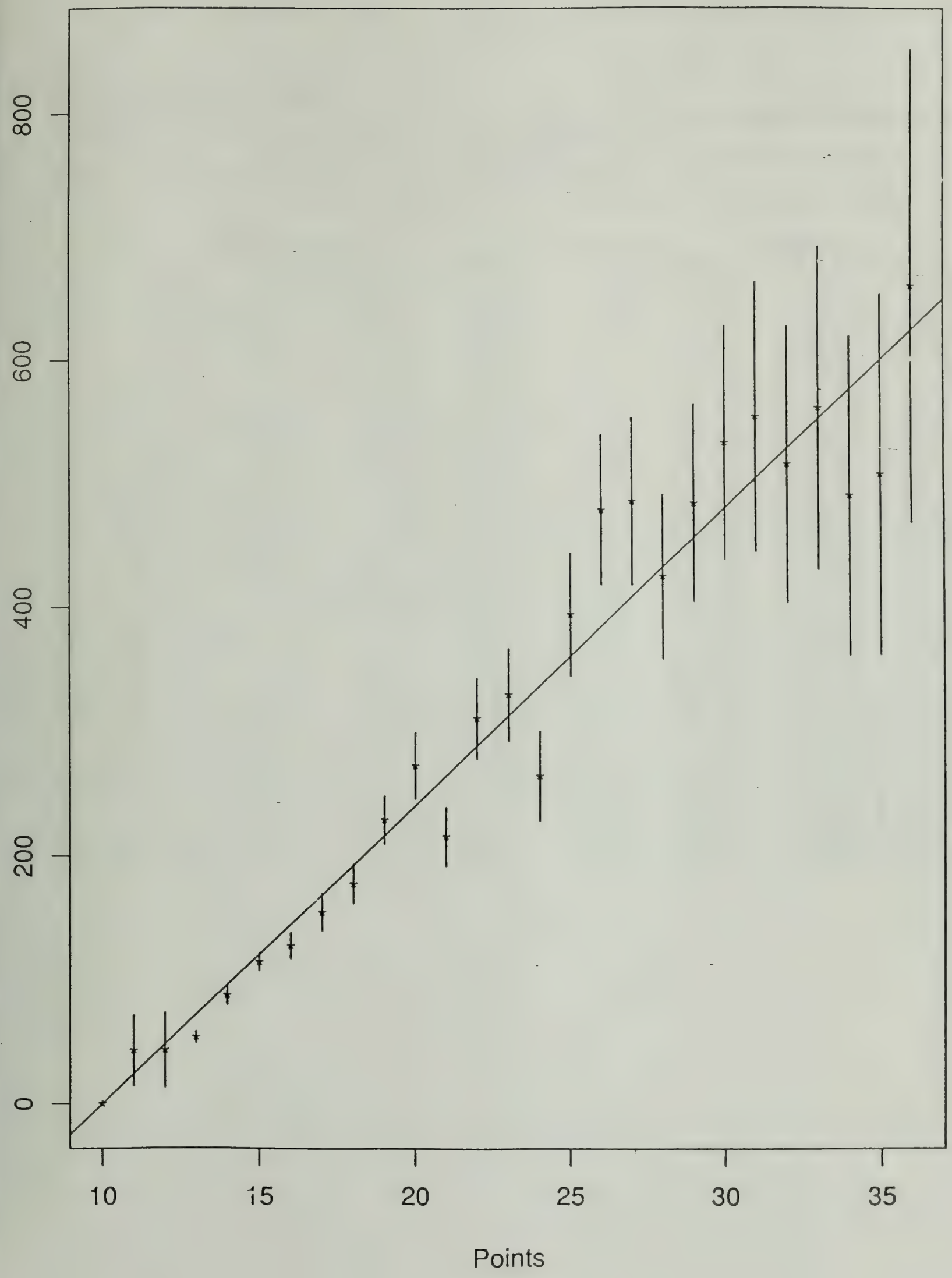
Set 3: Plan B proposal
ALL :
delta(clean-incident last year)=-62.87, S.D.=0.19
COLLISION :
delta(clean-incident last year)=-38.16, S.D.=0.2

Set 4: Plan C proposal
ALL :
delta(clean-incident last year)=-58.23, S.D.=0.19
COLLISION :
delta(clean-incident last year)=-33.54, S.D.=0.2

Additive fit for each point value compared to 10-point level

Points	ALL	S.D.(ALL)
10	0.00	0.93
11	42.77	14.34
12	43.30	15.15
13	53.58	2.38
14	87.43	3.66
15	114.32	3.64
16	127.35	5.21
17	154.39	7.65
18	177.36	7.94
19	228.73	9.73
20	272.42	13.26
21	215.44	11.81
22	310.17	16.20
23	329.38	18.56
24	264.22	18.01
25	393.97	24.87
26	478.33	30.42
27	485.31	33.86
28	424.66	33.27
29	484.08	39.85
30	533.07	47.46
31	554.26	54.60
32	515.55	56.04
33	561.27	65.43
34	490.52	64.63
35	507.71	72.92
36	660.11	95.82

1990
SDIP
Ex 5b



Set 2: Plan A proposal
Additive model and decomposition into severity and frequency components
At-fault (ALL) overall average pure premium=235.94
average severity=2158.51, average frequency=0.1093
Collision overall average pure premium=159.15
average severity=1677.24, average frequency=0.0949

	Additive model				Severity		Frequency	
Points	ALL	S.D.	COLLISION	S.D.	ALL	COLL	ALL	COLLSN
10	0.00	0.93	0.00	0.78	0.00	0.00	0.00000	0.00000
11	43.10	14.31	33.00	13.68	110.37	94.80	0.02158	0.02112
12	41.58	15.05	32.63	13.80	129.43	119.78	0.01997	0.01957
13	53.28	2.38	40.28	2.06	-6.26	85.34	0.02811	0.02198
14	87.53	3.66	47.52	2.83	34.23	27.79	0.04300	0.03083
15	114.19	3.64	80.96	3.21	211.70	254.73	0.04337	0.03494
16	127.00	5.21	86.51	4.45	139.81	185.95	0.05501	0.04287
17	155.73	7.68	102.56	6.37	99.20	152.48	0.07127	0.05517
18	176.08	7.92	113.28	6.53	176.35	200.91	0.07487	0.05732
19	227.65	9.70	135.83	7.73	333.42	240.08	0.08424	0.06598
20	270.99	13.18	174.95	10.92	420.97	367.87	0.09526	0.07609
21	216.66	11.80	177.39	11.10	114.31	318.41	0.09825	0.08233
22	306.44	16.04	200.51	13.46	377.21	334.88	0.11330	0.09229
23	331.68	18.52	241.31	16.31	443.60	443.84	0.11927	0.10356
24	266.90	17.94	234.06	17.92	127.69	434.38	0.12021	0.10078
25	389.50	24.44	264.03	21.26	546.44	537.38	0.13249	0.10571
26	475.52	29.73	288.65	24.17	716.28	557.42	0.14945	0.11508
27	519.57	34.53	329.73	28.55	825.20	619.63	0.15504	0.12713
28	428.40	32.56	329.71	30.50	392.98	504.35	0.16364	0.14030
29	501.71	39.80	397.41	38.27	560.17	716.70	0.17474	0.14755
30	517.42	44.85	340.10	38.39	757.44	627.48	0.16150	0.13134
31	542.56	51.38	366.87	45.01	757.67	689.41	0.16868	0.13647
32	533.50	54.60	368.78	47.48	728.98	601.05	0.16960	0.14848
33	574.17	62.68	316.61	47.81	703.93	348.83	0.18524	0.15082
34	500.57	61.92	440.66	64.71	413.02	722.84	0.18842	0.16591
35	465.19	63.80	383.61	63.41	342.84	576.62	0.18113	0.15503
36	611.36	84.60	378.34	68.48	832.53	484.56	0.18710	0.16373

Average difference between model prediction and observed pure premium for groups of cells with percentage fit (non-collision losses, Plan A)
(Positive entries indicate that model underpredicts losses.)

With 7.4% per point increment

Points 10-14

	Terr 1-11	Terr 12-26
Classes 10-15	-2.14	5.13
Classes 17-18	26.50	64.36
Classes 30	19.25	32.84
Classes 20-21-25-26	-16.41	18.23

Points 15-18

	Terr 1-11	Terr 12-26
Classes 10-15	3.86	-22.30
Classes 17-18	-23.61	-98.98
Classes 30	-24.49	-100.26
Classes 20-21-25-26	14.22	-49.31

Points 19 up

	Terr 1-11	Terr 12-26
Classes 10-15	17.01	-1.84
Classes 17-18	-46.46	-110.10
Classes 30	-116.18	-153.85
Classes 20-21-25-26	49.71	6.43

With 7% per point increment

Points 10-14

	Terr 1-11	Terr 12-26
Classes 10-15	-4.23	1.91
Classes 17-18	20.69	57.73
Classes 30	16.85	30.58
Classes 20-21-25-26	-20.75	13.85

Points 15-18

	Terr 1-11	Terr 12-26
Classes 10-15	8.59	-16.34
Classes 17-18	-21.87	-94.06
Classes 30	-20.25	-94.25
Classes 20-21-25-26	17.27	-42.81

Points 19 up

	Terr 1-11	Terr 12-26
Classes 10-15	31.46	16.98
Classes 17-18	-31.82	-89.23
Classes 30	-104.30	-139.32
Classes 20-21-25-26	64.69	25.66

Summary of SDIP Pure Premiums by SDIP Step

Data from the Merit Rating Board is summarized on the following 3 exhibits (Exhibits 8b-8d) for each of the possible plans defined in the table below.

	Schedule of Steps		
	Plan A	Plan B	Plan C
Minor Traffic Law Violation	2	2	3
Minor At-Fault Accident	3	4	5
Major At-Fault Accident	4	6	7
Major Traffic Law Violation	5	8	10

The date is separated into two categories; "All Coverages" and Collision. The "All Coverages" category includes the indicated portions of the following coverages:

A-1	(100%)
A-2	(50%)
B, Basic	(100%)
B, Increased Limits	(100%)
PDL, Basic	(100%)
PDL, Increased Limits	(100%)
Collision	(66%)
Medical Payments	(50%)

The exhibits show data from Driving Class 10 (experienced drivers) only, which is the majority of all exposures. On each exhibit, the pure premium for each SDIP step is adjusted by dividing the actual pure premium for that step by the average class/territory (1989 untempered) relativity for all the exposures by class and territory within the step. The adjustments are small, however, as indicated by the "Average Relativity" column which shows factors close to unity for all steps.

The differences between adjusted pure premiums for various SDIP steps can be used to get an indication of the approximate increment between steps. For example, for Plan A (recommended by the parties) the difference between step 10 and 15 for "All Coverages" is $253.48 - $140.32 = $113.16, or $22.63 per step. Multiplying by a factor to rate level of 1.6[1/] produces an indicated increment between steps of approximately $36. While the parties are recommending percentage increments, they will be of approximately this dollar size for the average insured.[2/]

They will differ slightly since they must fit the entire range of SDIP point levels up to 35 points, rather than the 10 to 15 point range used in this calculation.

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1/ To take into account development, trend, etc.
2/ The recommended increment for liability is approximately $25 for an average insured. The recommended increment for collision is approximately $17 for an average insured purchasing collision. Since about two thirds of the insureds purchase collision, the average recommended increment is approximately $25 + (2/3)*$17 = 36.

R A T I N G C L A S S 1 0

PLAN A - ALL COVERAGES

EXPOSURE	PURE PREMIUM	CLAIM FREQUENCY	SDIP STEP
884142.9	139.17	7.123	10
3074.5	237.23	10.961	11
3649.9	257.07	11.644	12
230617.8	199.80	10.213	13
95285.3	238.57	11.669	14
135639.2	254.89	11.340	15
69679.3	268.70	13.015	16
32546.1	307.30	15.163	17
33266.3	324.24	15.117	18
27851.3	370.36	15.813	19
17427.0	400.30	17.232	20
17029.3	359.35	17.141	21
12466.3	424.48	18.594	22
10047.5	445.16	19.149	23
8264.7	407.29	19.335	24
6619.5	523.88	20.802	25
5530.6	595.83	21.643	26
4470.7	589.15	22.301	27
3761.6	542.69	23.394	28
2946.6	643.19	24.978	29
2565.1	677.23	24.132	30
2041.3	642.60	24.249	31
1777.3	701.32	24.813	32
1362.7	639.05	25.171	33
1159.2	608.83	26.398	34
983.2	592.43	25.122	35
828.6	750.21	26.189	36
697.3	604.02	28.252	37
547.9	998.90	33.218	38
493.3	595.45	28.988	39
388.8	1711.01	32.665	40
322.1	1183.43	31.357	41
283.6	913.71	29.619	42
232.3	677.43	27.551	43
190.5	1018.44	35.696	44
183.3	1076.85	36.007	45
146.8	904.66	31.335	46
118.3	914.40	34.658	47
108.4	826.47	30.443	48
93.5	766.45	22.460	49
82.0	852.78	30.488	50
52.0	1497.29	46.154	51
56.0	1558.59	37.500	52
48.9	3901.43	51.125	53
40.3	1040.77	47.146	54
30.5	771.67	42.623	55
41.1	435.40	38.929	56
23.9	511.30	25.105	57
22.2	1969.41	54.054	58
22.5	4792.22	17.778	59
138.8	973.54	42.507	60
1619398.1	203.09	9.772	ALL

PLAN A - COLLISION

EXPOSURE	PURE PREMIUM	CLAIM FREQUENCY
624588.3	97.97	6.517
2092.1	151.56	9.082
2505.4	181.39	10.417
171291.6	142.76	8.980
73069.3	152.68	9.825
94700.9	181.07	10.139
52686.4	188.82	11.151
25422.1	209.69	12.875
26074.5	220.72	12.717
21385.1	235.28	13.252
13483.1	272.64	14.611
12952.5	272.43	15.032
9439.0	291.63	15.690
7628.2	328.35	17.003
6189.8	333.68	16.802
4973.3	338.34	17.272
4178.4	360.79	17.710
3346.8	399.80	19.003
2802.2	421.20	20.484
2191.2	512.11	21.769
1879.7	448.31	20.961
1511.7	452.00	19.911
1305.7	470.39	22.287
985.7	384.98	20.696
838.4	559.26	24.332
730.1	447.17	22.600
602.6	484.26	23.896
522.3	535.30	24.316
407.7	565.97	26.735
366.1	538.36	23.764
280.1	758.33	28.561
237.8	793.49	29.016
208.3	1035.87	28.805
165.8	609.10	25.935
142.2	690.41	26.020
130.1	617.84	26.134
101.6	1049.90	26.575
85.2	839.79	29.343
79.4	772.42	30.227
71.3	673.16	15.428
52.8	422.56	30.303
35.0	506.80	28.571
42.5	1020.33	30.588
35.9	945.99	44.568
28.0	877.57	42.857
22.3	751.35	35.874
35.4	507.46	25.424
18.7	214.92	10.695
15.9	3106.73	50.314
17.3	570.35	11.561
97.8	849.66	34.765
1172053.6	143.31	8.720

R A T I N G C L A S S 1 0

PLAN B - ALL COVERAGES

EXPOSURE	PURE PREMIUM	CLAIM FREQUENCY	SDIP STEP
884142.9	139.17	7.123	10
3074.5	237.23	10.961	11
3649.9	257.07	11.644	12
230617.8	199.80	10.213	13
8611.8	309.53	14.027	14
189922.3	244.41	11.196	15
52398.7	252.00	12.756	16
43353.8	285.08	13.378	17
38232.1	291.19	14.558	18
27817.2	316.02	14.283	19
25908.3	346.80	16.199	20
15979.9	362.01	15.832	21
17271.2	421.29	17.393	22
11845.6	388.45	17.804	23
10415.1	400.15	18.896	24
9121.7	496.11	18.878	25
6769.8	509.02	19.543	26
6492.0	471.16	19.855	27
5049.9	507.30	21.050	28
4356.8	563.88	22.310	29
3646.3	503.67	22.105	30
3111.7	585.42	23.621	31
2605.6	683.39	24.678	32
2133.4	607.05	23.437	33
1839.4	600.82	25.008	34
1612.3	621.95	24.251	35
1382.4	528.33	25.318	36
1096.4	614.44	27.089	37
988.6	779.31	27.109	38
853.7	685.87	28.230	39
681.8	828.12	26.987	40
620.8	730.33	28.189	41
481.8	654.19	29.473	42
475.3	616.77	24.406	43
361.2	553.19	30.454	44
394.6	1050.89	33.452	45
221.4	1692.49	36.134	46
279.7	2178.11	29.675	47
163.7	1074.61	36.042	48
200.5	816.00	33.416	49
128.7	1348.31	34.188	50
165.2	1029.70	34.504	51
100.6	1084.30	29.821	52
134.6	1175.62	32.689	53
65.5	789.53	41.221	54
85.6	608.10	32.710	55
53.5	1390.71	28.037	56
69.0	3069.25	39.130	57
26.4	660.00	30.303	58
59.6	776.85	48.658	59
322.8	1322.17	40.892	60
1619393.4	203.09	9.772	ALL

PLAN B - COLLISION

EXPOSURE	PURE PREMIUM	CLAIM FREQUENCY
624588.3	97.97	6.517
2092.1	151.56	9.082
2505.4	181.39	10.417
171291.6	142.76	8.980
6564.6	172.75	10.861
134565.2	168.08	9.923
40351.3	184.00	10.850
35150.8	187.41	11.112
29551.9	206.30	12.355
20547.2	214.46	12.352
20563.8	228.89	13.480
12171.8	247.60	13.704
13297.9	282.66	14.935
9175.6	253.88	14.996
7824.9	318.36	16.128
6932.8	323.04	16.357
5116.8	346.31	16.866
4863.7	344.37	17.106
3728.1	331.83	17.650
3288.5	385.51	18.610
2730.4	396.34	19.814
2288.0	389.20	19.668
1934.4	541.75	21.402
1556.0	406.89	19.794
1333.8	451.65	21.817
1179.9	440.65	20.425
989.8	456.17	22.429
810.9	449.72	21.581
706.3	555.98	24.211
646.1	518.04	25.228
480.3	529.55	25.401
456.4	519.00	23.444
363.3	520.20	24.498
355.0	544.30	21.408
259.7	524.97	25.799
285.3	846.75	29.793
172.3	736.12	31.921
200.6	849.60	25.922
116.1	917.91	31.008
148.8	397.79	24.194
90.8	816.13	33.040
124.1	853.13	24.174
66.8	1332.13	31.437
93.3	708.80	27.867
44.1	1115.26	45.351
63.8	626.99	23.511
42.8	203.01	18.692
50.0	1353.40	38.000
19.0	905.53	21.053
39.3	926.59	38.168
234.8	863.07	31.942
1172054.5	143.31	8.720

R A T I N G C L A S S 1 0

PLAN C - ALL COVERAGES

SDIP STEP	EXPOSURE	PURE PREMIUM	CLAIM FREQUENCY
10	884142.9	139.17	7.123
11	3074.5	237.23	10.961
12	3649.9	257.07	11.644
13	4939.3	236.11	11.317
14	233115.8	202.81	10.310
15	89457.6	235.41	10.029
16	84455.6	242.29	11.889
17	18958.8	294.40	14.004
18	84552.8	257.38	12.744
19	8030.3	344.07	14.931
20	26492.6	294.91	14.740
21	29187.3	307.71	14.260
22	27189.8	328.54	15.116
23	8690.8	380.53	16.845
24	15190.1	415.03	16.715
25	15741.0	357.18	16.676
26	9208.3	388.09	17.169
27	7984.9	422.68	19.612
28	8654.4	403.08	17.968
29	7603.6	414.29	18.820
30	4806.9	530.00	19.784
31	5364.5	458.79	19.182
32	5314.8	469.68	19.888
33	3487.3	586.14	22.338
34	3268.2	560.19	22.183
35	3412.6	549.38	21.128
36	2678.5	513.62	22.587
37	2149.1	598.96	23.359
38	2188.0	597.40	25.503
39	1952.9	738.08	25.603
40	1490.0	594.31	22.953
41	1434.7	627.21	22.235
42	1295.1	648.04	25.095
43	1128.2	573.87	24.907
44	974.3	630.79	23.812
45	895.8	671.15	25.340
46	710.4	758.83	29.983
47	706.5	600.22	27.601
48	621.1	780.45	23.668
49	508.4	645.16	26.161
50	499.5	682.79	30.030
51	447.9	701.94	28.131
52	382.6	620.13	24.830
53	351.3	636.88	33.305
54	287.1	526.77	28.213
55	287.5	1348.94	33.391
56	241.6	672.35	26.904
57	214.5	753.71	31.235
58	197.3	774.98	33.452
59	160.1	3381.38	28.732
60	1616.3	1205.02	36.008
ALL	1619393.3	203.09	9.772

PLAN C - COLLISION

SDIP STEP	EXPOSURE	PURE PREMIUM	CLAIM FREQUENCY
10	624588.3	97.97	6.517
11	2092.1	151.56	9.082
12	2505.4	181.39	10.417
13	3540.9	170.82	9.404
14	173426.8	143.35	9.032
15	56460.9	175.61	9.435
16	66160.5	153.25	9.926
17	14216.1	206.99	12.029
18	66958.5	180.79	10.693
19	6235.1	212.00	12.622
20	20595.1	203.65	12.566
21	21384.3	215.10	12.444
22	21687.2	215.23	12.496
23	6758.8	245.79	13.849
24	11750.7	241.29	13.965
25	11855.0	288.35	15.082
26	7226.8	250.04	14.031
27	5999.2	302.47	16.486
28	6544.3	294.94	15.876
29	5767.3	312.35	16.628
30	3660.6	365.70	17.265
31	3945.1	354.47	16.730
32	3916.2	298.30	16.572
33	2656.5	414.19	18.558
34	2439.5	378.00	18.815
35	2562.2	341.07	17.407
36	1998.8	419.96	20.612
37	1598.3	411.87	19.583
38	1581.8	548.39	23.265
39	1422.8	441.15	20.031
40	1107.5	385.03	20.406
41	1038.0	414.24	18.786
42	935.2	491.94	21.172
43	827.7	444.78	21.989
44	702.4	465.81	21.071
45	625.8	489.80	23.330
46	541.1	535.56	24.764
47	498.2	468.03	23.886
48	447.6	443.50	22.341
49	376.5	616.25	24.436
50	378.1	495.31	24.068
51	324.3	520.96	24.052
52	285.2	536.45	21.038
53	252.8	513.88	28.481
54	214.3	553.06	25.198
55	212.5	734.38	31.529
56	183.2	616.68	22.926
57	150.6	818.48	27.224
58	137.7	599.61	26.144
59	120.8	1174.22	24.834
60	1157.0	817.02	29.991
ALL	1172051.6	143.31	8.720

The Commonwealth of Massachusetts
Motor Vehicle Insurance — Merit Rating Board
100 Nashua Street - 6th Floor
Boston, Massachusetts 02114

MARY ANN MULHALL
DIRECTOR
(617) 727-7962

TO: Robert MacNicholl, SRB
Howard Mahler, MARB
Hilary Rowen, AG
Alan Zalavsky, MIT

FROM: Mary Ann Mulhall, Director

DATE: July 14, 1989

RE: SDIP Data Requests Incident Information

Below please find further information regarding two incidents provided in the SDIP Data Requests.

Lane Violation (incident index 15)- is grouped and includes;
Chapter 89 Section 4A, Lane Violation- motorcycles more than two abreast; not single file while passing; operating on ways divided into lanes; failure to ascertain if it is safe to change lanes; motorcycle, single file when passing.
Chapter 89 Section 4B, Keep In Right Lane- failure to keep in right lane; driving in breakdown lane.
Chapter 89 Section 4C, Left Lane Exclusion- violation of left lane exclusion of heavy vehicles; passing commercial vehicles, excess 2 1/2 tons (except bus) use right lane pass in adjacent lane.

License Restriction (incident index 10)- is grouped and includes;
Chapter 90 Section 8, License Restriction- operating in violation of restriction of license; driving during restricted hours; driving during restricted hours, under eighteen; operating vehicle for which operator not licensed; operating without a license; violation of restriction.

Chapter 90 Section 8B, Learner Permit- learner's permit, motorcycle can not operate after sunset or before sunrise; learner's permit, motorcycle expires in 6 months; learner's permit, violation of; motorcycle, learner's permit, no passenger.

I sampled 82 citation documents that contained Chapter 90 Section 8, License Restriction violations and have attached a copy of my findings for your review.

Please feel free to call me with any questions you may have.

MAM:mpc
attachments

SAMPLING: CHAPTER 90 SECTION 8 LICENSE RESTRICTION - operating in violation of restriction of license; driving during restricted hours; under eighteen; operating vehicle for which operator not licensed; operating without license. Sampling consisted of 82 documents with dates written in 1987, 1988, and 1989. There are approximately 4400 Chapter 90 Section 8 violations posted to the Citation Database for these three years.

Operating a Motor Vehicle Without Proper License	06
Operating Without Eyeglasses	10
Operating in Violation of Restriction on License	26
Motorcycle Learners Permit (after sunset)	01
Operation in Violation of Learners Permit	11
Operating Without License	12
Expired License	08
Operating Without License in Possesion	01
Operating in Violation of License Restriction (under 18)	07

ANALYSIS OF SDIP INCIDENT STEP VALUES
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Exhibits

1. SDIP Liability Violation/Accident Pure Premium Differentials
2. Liability Violation/Accident SDIP Incident Detail
3. Liability Excess Pure Premium Per Step with Standard Deviations
4. SDIP Liability Violation/Accident Pure Premium Differentials Summary
5. SDIP Liability Violation/Accident Excess Pure Premium per Step Incident Category Summary - Standard Deviation
6. SDIP Collision Violation/Accident Pure Premium Differentials
7. Collision Violation/Accident SDIP Incident Detail
8. Collision Excess Pure Premium Per Step with Standard Deviations
9. SDIP Collision Violation/Accident Pure Premium Differentials Summary
10. SDIP Collision Violation/Accident Excess Pure Premium per Step Incident Category Summary - Standard Deviation
11. SDIP Accident Thresholds

Automobile Insurers Bureau
July 30, 1997

ANALYSIS OF SDIP INCIDENT STEP VALUES

Purpose

The current SDIP step values assigned to the various motor vehicle accidents and violations for private passenger automobile insurance have been in effect since 1990. The validity of these values were last confirmed by an AIB study conducted in 1993 based on the historical loss experience of policy year 1991. The purpose of this analysis is to determine whether the current SDIP step values for accidents and violations continue to adequately differentiate prospective loss experience.

Data

The analysis which follows is based on SDIP Incident Classification Data.[1] This data was prepared from 1995 policy effective year statistical records from C.A.R. and 1995 policy effective year insurance company SDIP policy inquiry response records of the M.R.B. Exposures and incurred losses from C.A.R. statistical records are through the accounting date of June, 1996 received by the M.R.B. through August 29, 1996.

The AIB has relied on the accuracy of the SDIP Incident Classification Data, without independent audit or verification of that data. This data includes (i) the assignment of incident history for the year prior to the 1995 policy effective year, (ii) earned exposures, (iii) claim incidents and, (iv) at-fault incurred losses.

Scope

The updated SDIP Incident Classification Data was used to update the AIB's earlier analysis completed in 1993. Both analyses attempt to validate the following step value assignments by incident category for liability (A-1, B, PDL, PIP, MP) and collision, respectively:

Incident Category	Step Value
Minor Violations	2
Minor Accidents	3
Major Accidents	4
Major Violations	5

Both analyses test whether the step value relationships among these categories are valid based on one year of data relative to the accident/violation history of the vehicle for the year immediately preceding this experience. This analysis also tests whether the $2,000 loss amount which distinguishes a minor from a major accident is appropriate given the step value assignments of 3 and 4 respectively.

This analysis is not sufficient for determining alternative step values or alternative accident/violation categories.

Measures

Excess Pure Premium: The excess pure premium is the amount by which the 1995 actual pure premium for vehicles with a given incident type (accident/violation) in the prior year is more/(less) than the 1995 actual pure premium for vehicles who were incident free in the prior year.

Excess Pure Premium : Per step: The excess pure premium per step is the excess pure premium divided by the marginal step value for the accident/violation incident. For example, a speeding ticket currently has a marginal step value of 3 (+2 for the ticket, +1 for loss of

[1] This data was requested by the State Rating Bureau using the same specifications the parties used in a similar request for the 1994 hearings. The data was prepared by the Merit Rating Bureau, and provided to the parties, along with the data specifications which define it, on September 30, 1996

incident free year). The excess pure premium per step for a speeding ticket is equal to the difference between the pure premium for a speeding ticket and the pure premium for no incidents in the prior year, divided by 3.

Variance of the Excess: Pure Premium — The variance of the excess pure premium is approximately equal to

$$\frac{\text{(the sum of the squared individual losses)}}{(\text{exposures})^2}$$

Variance of the Excess: Pure Premium/Step — $(\text{variance of excess pure premium}/(\text{marginal step value})^2)^{1/2}$

These measures, along with the raw data, are summarized by prior year incident category for liability and collision on Exhibits 1 and 6, respectively.

Variation of Excess Pure Premiums Per Step Within Current Incident Categories

Exhibits 2 and 7 graphically display the liability and collision excess pure premiums per step for each incident and incident category, respectively. Exhibits 3 and 8 graphically display the liability and collision incident excess pure premiums per step and their standard deviation ranges, respectively.

Major Violations

The major violations category includes seven incidents (incident codes 1-8) which each carry a step value of 5. There is considerable variation among the excess pure premiums per step for each incident in this category relative to the excess pure premium per step for the category as a whole.

Only 0.15% of the policy year 1995 earned vehicle exposures had incurred a major violation in the preceding policy year. Of these vehicles, approximately 82% of the violations were for driving under the influence of drugs or alcohol (incident code 2). The remainder of the incident types classified as major violations reflect so few exposures that they constitute no more than .01% of total exposures. As a result, the excess pure premium per step for major violations is largely driven by a single incident type.

Minor Violations

The minor violation category includes nineteen incidents (incident codes 9-32) which each carry a step value of 2. Like major violations, there is considerable variation among the excess pure premiums per step for each incident in this category relative to the excess pure premium per step for the category as a whole.

Approximately 6.4% of the policy year 1995 earned vehicle exposures had incurred a minor violation in the preceding policy year. Of these vehicles, less than 0.5% of them were involved in criminal violations (incident codes 9 - 19). The most common incident within the minor violation category is speeding. The top five minor violations, based on vehicle exposure counts, are summarized below.

Minor Violation	% Total
Speeding (20)	62.1%
Failure to stop (22)	11.3%
Other non-criminal (31)	7.5%
No inspection sticker (29)	6.7%
Unregistered vehicle (26) or improper equipment	5.9%
Subtotal	93.5%

Minor & Major Accidents

There are nine incident codes for accidents (incident codes 41-49). Incident codes 41-44 cover minor accidents (at fault losses less than $2,000) and receive a step value of 3; incident codes 45-49 cover major accidents (at fault losses $2,001 & up) and receive a step value of 4.

Approximately, 2.7% of the policy year 1995 earned vehicle exposures were involved in an accident in the preceding policy year. Of these vehicles, approximately 63% of them were involved in minor accidents.

The average excess pure premiums per step for the minor and major accident incidents show relatively small variation about their respective mean excess pure premiums per step for the category as a whole. The most significant variation occurs at the lowest at fault loss level (< $501, incident code 41) and the highest at fault loss level (> $10,000, incident code 49). Not surprisingly, these two incident types have the fewest exposures among the accident type incidents, representing less than 4.0% of all exposures in the accident categories combined.

Variation of Excess Pure Premiums by Type of Incident Category

This analysis attempts to show whether the current step values for each incident category adequately and fairly distinguish the potential for future loss experience. If the current step values by incident category are appropriate, the average excess pure premium per step should be approximately equal for each incident category.

Liability Coverages

Exhibit 4 summarizes the excess pure premiums per step for each incident category for liability. With the exception of the minor violation category, the excess pure premiums per step are approximately the same.

The step value of 2 (with a marginal value of 3) for minor violations appears to be out of line relative to the step values presently assigned to the other incident categories. The data suggest that minor violations have roughly the same effect as minor accidents on future loss costs. This is evidenced by the fact that the average at fault pure premiums for minor violations and accidents are approximately the same ($680.86 for violations; $682.50 for accidents). The difference in the estimated excess pure premium per step for these two categories is due to the different step values currently assigned to them. If a step value of 3 were assigned to minor violations, the average excess pure premium per step for this category would fall to $71.27, which compares with $71.68 for the minor accident category.

Page 2 of Exhibit 4 provides some insight for this. The at fault claim frequency per 100 vehicles is approximately the same for vehicles with one minor violation and one minor accident in the prior year period. For both categories, one minor violation or accident in a given year indicates that the accident frequency in the following year will be roughly 2/3 greater than the frequency for a vehicle which had no accident or violation in the preceding year.

Collision

Exhibit 9 summarizes the excess pure premiums per step for each incident category for collision. The average excess pure premiums per step over the incident categories for collision are generally similar, although they are slightly more variant than those estimated for liability.

ANALYSIS OF SDIP INCIDENT STEP VALUES

Similar to liability, the step value assigned to minor violations appears low relative to the other categories The average collision pure premiums for vehicles with a minor violation or major accident in the prior year are approximately the same. The subsequent frequencies for these two incident categories are approximately the same, and average about 2/3 higher than the incident free risk.

The Loss Value Threshold for Minor and Major Accidents

In 1995, the loss threshold which defined a claim as a minor or major accident was increased from $1,500 to $2,000. If the present step value assignments of 3 and 4 are correct, the ratio of the average excess pure premium for loss amounts above the threshold over the average excess pure premium for loss amounts below the threshold should be approximately 4/3.

Exhibit 11 examines the ratios at each possible loss threshold. The data suggests that the current threshold of $2,000 is reasonable.

Summary

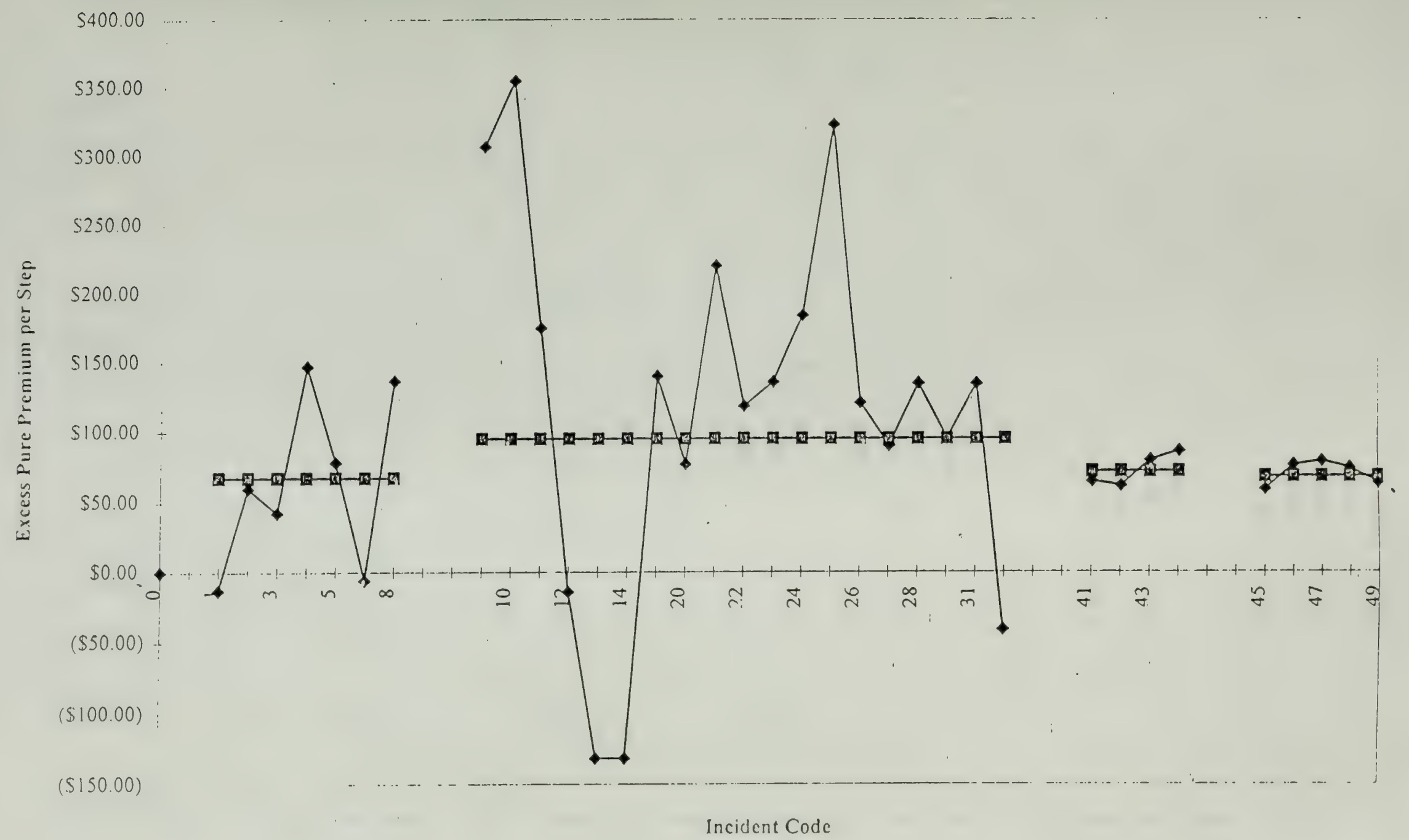
On a broad basis, the relative constancy of the excess pure premiums per step across incident categories indicates that the current classifications and step values are reasonable. Further, the data confirm that prior violations are as meaningful as prior claims in predicting future claims.

cident Code	Description of the Incident	Step Value	1995 PDL Exposures In Car Years	Exposure % Distribution	Policy Year 1995 At Fault Losses	Policy Year 1995 At Fault Incidents	Frequency per 100 Exposures	Pure Premium	Variance of Pure Premium	Excess Pure Premium Per Step	Variance of Excess Pure Premium per Step	Standard Deviation of Excess Pure Premium Per Step
	No Incident	-1	2,613 692.3	88.79%	$1,034,412,558	300,671	11.5037	$395.77	$4.01	$0.00	$0.00	$0 00
	Vehicular Homicide	5	3.5	0.00%	$1,109	1	28.5714	$316.86	$71,713.18	($13.15)	$1,992.03	$44 63
	Driving Under the Influence of Alcohol or Drugs	5	3,718.2	0.13%	$2,808,054	651	17.5086	$755.23	$4,829.87	$59.91	$134.16	$11 58
	Driving to Endanger	5	133.3	0.00%	$86,651	26	19.5000	$649.88	$72,910.26	$42.35	$2,025.29	$45 00
	Driving After License Suspended	5	357.6	0.01%	$456,339	101	28.2452	$1,276.18	$103,182.34	$146.73	$2,866.18	$53 54
	Driving After License Revoked	5	135.0	0.00%	$116,672	33	24.4444	$864.24	$101,015.13	$78.08	$2,805.98	$52 97
	Leaving the Scene of An Accident	5	71.9	0.00%	$25,913	8	11.1240	$360.32	$79,525.84	($5.91)	$2,209.05	$47 00
	Refusing to Obey A Police Officer	5	95.7	0.00%	$116,222	33	34.4948	$1,214.86	$101,455.69	$136.52	$2,818.21	$53 09
	Driving Without A License	2	494.2	0.02%	$650,217	133	26.9140	$1,315.78	$62,567.06	$306.67	$6,951.90	$83 38
	Driving A Vehicle with no Liability Insurance	2	234.7	0.01%	$342,532	69	29.4034	$1,459.65	$119,370.87	$354.63	$13,263.43	$115 17
	Driving After Registration Revoked or Suspended	2	154.4	0.01%	$141,882	35	22.6659	$918.83	$117,842.67	$174.35	$13,093.63	$114 43
12	Operating a Vehicle Recklessly	2	5.7	0.00%	$2,000	1	17.6471	$352.94	$102,584.98	($14.28)	$11,398.33	$106 76
13	Operating a Vehicle Without Authority	2	1.8	0.00%	$0	0	0.0000	$0.00	$0.00	($131.92)	$0.00	$0 00
14	Exhibit another Persons License	2	0.6	0.00%	$0	0	0.0000	$0.00	$0.00	($131.92)	$0.00	$0 00
19	Other Criminal Traffic Violation	2	23.3	0.00%	$18,949	13	55.9140	$815.01	$77,520.76	$139.75	$8,613.42	$92 81
20	Speeding	2	116,378.2	3.95%	$72,910,752	21,157	18.1795	$626.50	$119.50	$76.91	$13.28	$3 64
21	Violating License Restriction/Learner Permit	2	199.3	0.01%	$210,209	59	29.5987	$1,054.56	$66,675.86	$219.60	$7,408.43	$86 07
22	Failure to Stop	2	21,077.3	0.72%	$15,825,898	4,620	21.9194	$750.85	$625.76	$118.36	$69.53	$8 34
23	Failure to Use Safety	2	3,679.6	0.13%	$2,953,811	808	21.9590	$802.76	$4,716.24	$135.66	$524.03	$22 89
24	Improper Passing	2	802.8	0.03%	$759,859	187	23.2925	$946.47	$22,979.38	$183.57	$2,553.26	$50 53
25	Allowing Unlicensed Operation of a Vehicle	2	986.2	0.03%	$1,344,153	324	32.8545	$1,363.01	$22,882.80	$322.41	$2,542.53	$50 42
26	Vehicle Unregistered or has Improper Equipment	2	11,142.0	0.38%	$8,445,897	2,292	20.5708	$758.02	$1,228.33	$120.75	$136.48	$11 68
27	Failure to Yield Right of Way at an Intersection	2	1,618.3	0.05%	$1,077,149	314	19.4027	$665.59	$5,827.78	$89.94	$647.53	$25 45
28	Lane Violation	2	3,934.8	0.13%	$3,146,26	832	21.1445	$799.59	$3,870.22	$134.61	$430.02	$20 74
29	No Inspection Sticker	2	12,486.6	0.42%	$8,511,895	2,238	17.9232	$681.68	$1,084.87	$95.31	$120.54	$10 98
31	Other Non-Criminal Violation	2	13,958.5	0.47%	$11,149,381	2,978	21.3347	$798.75	$1,508.98	$134.33	$167.66	$12 95
32	Minor Traffic Non-Mass	2	120.6	0.00%	$32,849	10	8.2930	$272.42	$16,215.20	($41.12)	$1,801.69	$42 45
	At Fault Loss Amount < $501	3	68.2	0.00%	$44,666	12	17.6039	$655.25	$98,137.15	$64.87	$6,133.57	$78 32
	At Fault Loss Amount $501 - $1,000	3	25,221.3	0.86%	$16,194,519	4,793	19.0038	$642.10	$480.13	$61.58	$30.01	$5 48
	At Fault Loss Amount $1,001 - $1,500	3	14,922.1	0.51%	$10,644,145	2,845	19.0657	$713.31	$946.49	$79.39	$59.16	$7 69
	At Fault Loss Amount $1,501 - $2,000	3	9,799.0	0.33%	$7,249,084	1,860	18.9815	$739.78	$2,118.40	$86.00	$132.40	$11 51
	At Fault Loss Amount $2,001 - $3,000	4	12,328.3	0.42%	$8,516,271	2,323	18.8429	$690.79	$1,072.63	$59.01	$42.91	$6 55
	At Fault Loss Amount $3,001 - $4,000	4	6,469.0	0.22%	$5,009,359	1,302	20.1268	$774.36	$3,862.83	$75.72	$154.51	$12 43
	At Fault Loss Amount $4,001 - $5,000	4	3,706.6	0.13%	$2,917,662	771	20.8008	$787.16	$4,607.15	$78.28	$184.29	$13 58
	At Fault Loss Amount $5,001 - $10,000	4	5,266.8	0.18%	$4,025,697	1,063	20.2782	$764.36	$2,959.70	$73.72	$118.39	$10 88
	At Fault Loss Amount >$10,000	4	1,229.2	0.04%	$875,580	239	19.4441	$712.34	$18,384.02	$63.31	$735.36	$27 12
	2 or More Incidents		55,364.2	1.88%	$62,125,202	15,804	28.5455	$1,122.12	$391.84			
	C A R Policy has no matching M R B		3,743.6	0 13%	$1,977,069	711	18.9925	$528.12	$2,035.33			
	Total		2,943,624.2	100.00%	$1,285,126,472	369,322	12.5465	$436.58	$3.78			

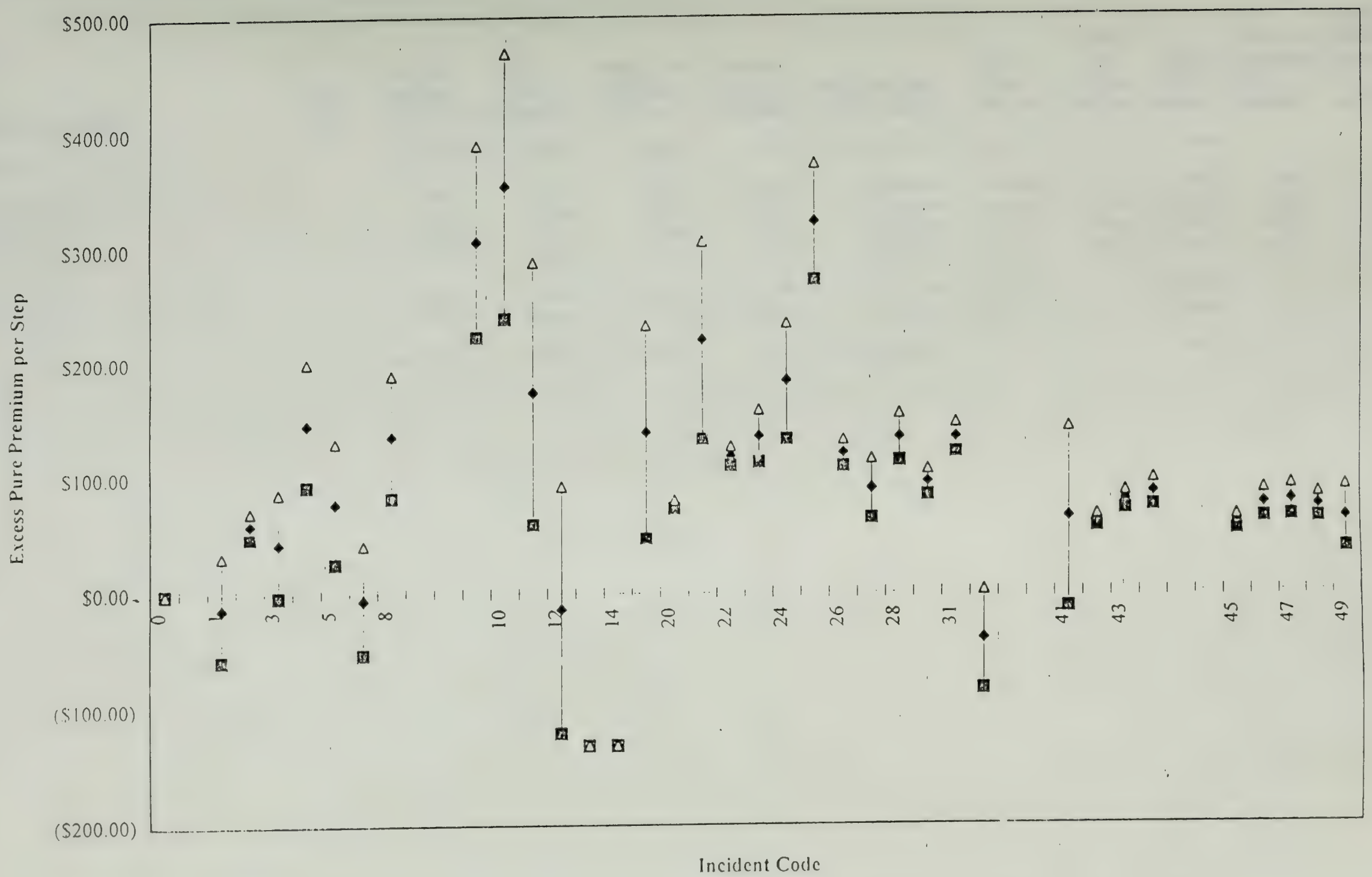
Year 1995 loss data is as of June 30, 1996

Violation/Accident

SDIP Incident Detail Excess Pure Premium Per Step



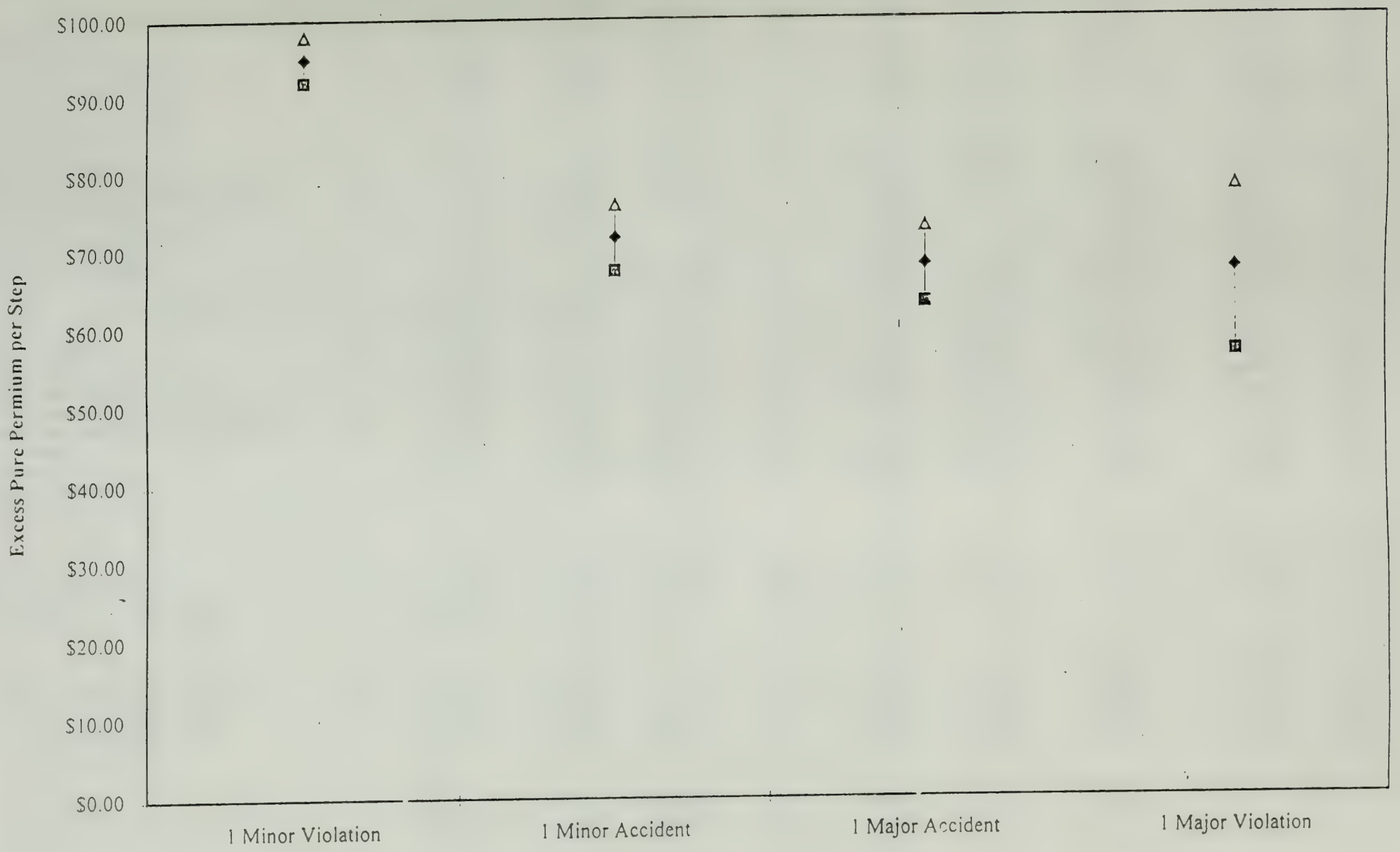
Liabililty Excess Pure Premium per Step with Standard Deviation



SDIP Liability Violation/Accident Pure Premium Differentials
Summary of At-Fault Claim and Loss Experience by Incidents in Previous Year
Policy Year 1995 as of 6/30/96
All Classes and Territories Combined

Description of Incident	Step Value	1995 PDL Exposures in Car Years	Exposure Percent Distribution	Policy Year 1995 At Fault Claims	Incident Percent Distribution	Policy Year 1995 At Fault Losses	At Fault Pure Premium	Excess Pure Premium Per Step	Variance of Pure Premium	Variance of Excess Pure Premium	Standard Deviation of Excess Pure Premium
No Incident	-1	2,613,692.3	88.79%	300,671	81.41%	$1,034,412,558	$395.77		$4.01		
1 Minor Violation	2	187,298.7	6.36%	36,070	9.77%	$127,523,700	$680.86	$95.03	$77.47	$8.61	$2.93
1 Minor Accident	3	50,010.6	1.70%	9,510	2.57%	$34,132,414	$682.50	$71.68	$287.93	$18.00	$4.24
1 Major Accident	4	28,999.8	0.99%	5,703	1.54%	$21,344,569	$736.03	$68.05	$592.04	$23.68	$4.87
1 Major Violation	5	4,515.2	0.15%	853	0.23%	$3,610,960.00	$799.74	$67.33	$4,148.11	$115.23	$10.73
2 or More Incidents		55,364.2	1.88%	15,804	4.28%	$62,125,202	$1,122.12		$391.84		
No Match between CAF and MRB Records		3,743.6	0.13%	711	0.19%	$1,977,069	$528.12		$2,035.33		
Totals		2,943,624.2	100.00%	369,322	100.00%	$1,285,126,472	$436.58		$3.78		

SDIP Liability Violation/Accident Excess Pure Premium per Step
Incident Category Summary --- Standard Deviation

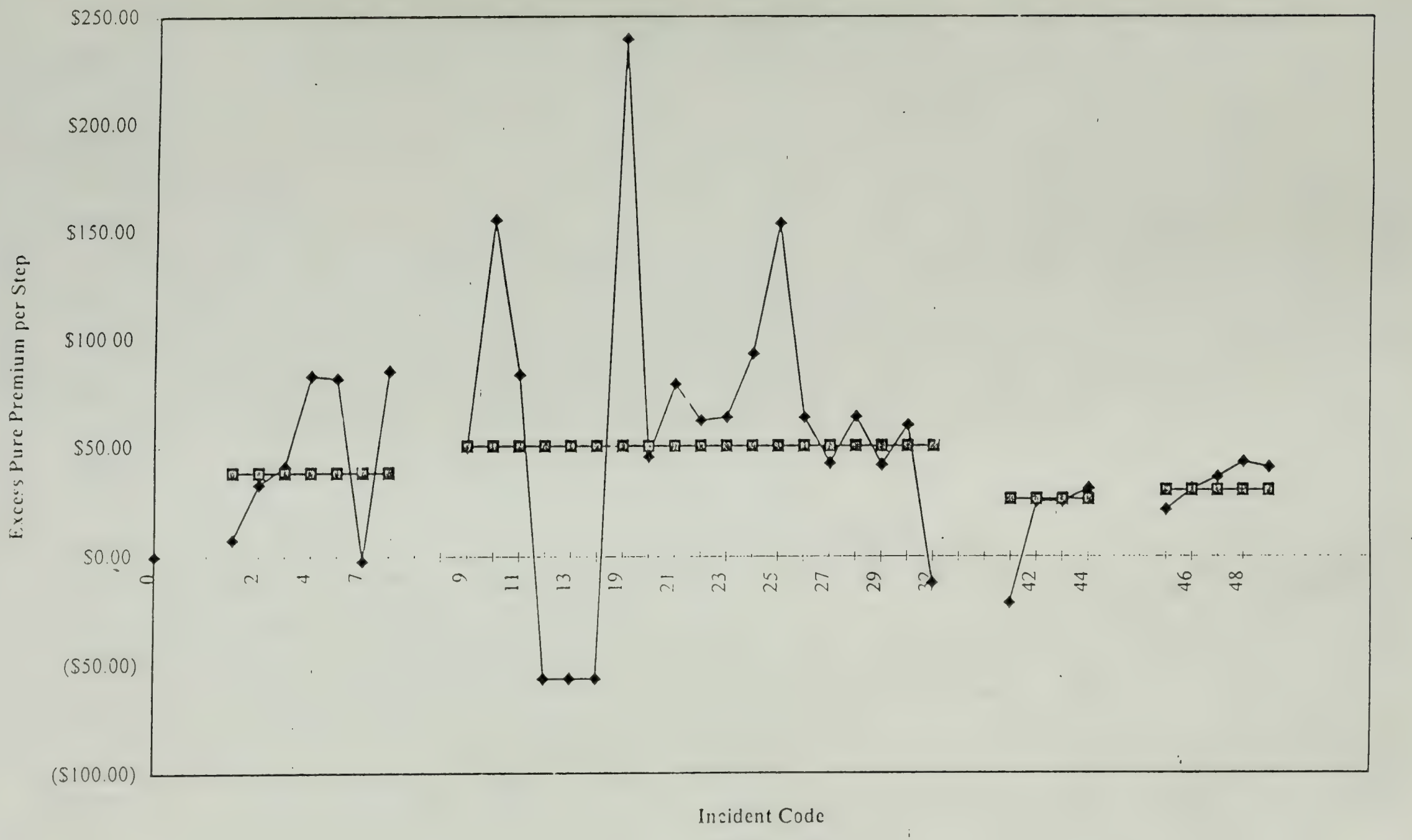


Incident Code	Description of the Incident	Step Value	1995 Collision Exposures in Car Years	Exposure % Distribution	Policy Year 1995 Collision Losses	Policy Year 1995 Collision Incidents	Frequency per 100 Exposures	Pure Premium	Variance of Pure Premium	Excess Pure Premium Per Step	Variance of Excess Pure Premium per Step	Standard Deviation of Excess Pure Premium Per Step
	No Incident	-1	1,895,879.3	89.03%	$321,095,651	167,996	8.8611	$169.37	$0.45	$0.00	$0.00	$0.00
1	Vehicular Homicide	5	2.4	0.00%	$523	1	41.3793	$216.41	$27,454.96	$7.84	$762.64	$27.62
2	Driving Under the Influence of Alcohol or Drugs	5	2,244.3	0.11%	$828,027	336	14.9716	$368.95	$1,139.82	$33.26	$31.66	$5.63
3	Driving to Endanger	5	69.9	0.00%	$29,152	11	15.7330	$416.95	$49,081.08	$41.26	$1,363.36	$36.92
4	Driving After License Suspended	5	174.2	0.01%	$116,682	46	26.4115	$669.94	$26,299.98	$83.43	$730.55	$27.03
5	Driving After License Revoked	5	68.0	0.00%	$45,059	14	20.5882	$662.63	$94,540.96	$82.21	$2,626.14	$51.25
7	Leaving the Scene of An Accident	5	35.6	0.00%	$5,525	3	8.4309	$155.27	$15,237.70	($2.35)	$423.27	$20.57
8	Refusing to Obey A Police Officer	5	50.6	0.00%	$34,532	12	23.7232	$682.68	$92,626.10	$85.55	$2,572.95	$50.72
9	Driving Without A License	2	235.2	0.01%	$75,152	49	20.8363	$319.57	$4,211.30	$50.07	$467.92	$21.63
10	Driving A Vehicle with no Liability Insurance	2	81.3	0.00%	$51,713	28	34.4262	$635.82	$25,761.44	$155.48	$2,862.38	$53.50
11	Driving After Registration Revoked or Suspended	2	59.9	0.00%	$25,231	14	23.3658	$421.10	$22,755.56	$83.91	$2,528.40	$50.28
12	Operating a Vehicle Recklessly	2	2.0	0.00%	$0	0	0.0000	$0.00	$0.00	($56.46)	$0.00	$0.00
13	Operating a Vehicle Without Authority	2	1.8	0.00%	$0	0	0.0000	$0.00	$0.00	($56.46)	$0.00	$0.00
14	Exhibit another Persons License	2	0.0	0.00%	$0	0	0.0000	$0.00	$0.00	($56.46)	$0.00	$0.00
19	Other Criminal Traffic Violation	2	13.2	0.00%	$11,680	6	45.5696	$887.09	$138,093.86	$239.24	$15,343.76	$123.87
20	Speeding	2	85,449.2	4.01%	$26,219,466	12,232	14.3149	$306.84	$26.38	$45.83	$2.93	$1.71
21	Violating License Restriction/Learner Permit	2	95.8	0.00%	$39,121	24	25.0435	$408.22	$15,699.91	$79.62	$1,744.43	$41.77
22	Failure to Stop	2	14,066.3	0.66%	$5,016,951	2,463	17.5099	$356.66	$130.52	$62.43	$14.50	$3.81
23	Failure to Use Safety	2	2,473.7	0.12%	$894,205	456	18.4342	$361.49	$721.45	$64.04	$80.16	$8.95
24	Improper Passing	2	527.3	0.02%	$237,062	112	21.2423	$449.62	$4,524.89	$93.42	$502.77	$22.42
25	Allowing Unlicensed Operation of a Vehicle	2	483.4	0.02%	$304,739	149	30.8223	$630.39	$7,036.83	$153.67	$781.87	$27.96
26	Vehicle Unregistered or has Improper Equipment	2	6,427.6	0.30%	$2,322,206	1,086	16.8959	$361.29	$314.52	$63.97	$34.95	$5.91
27	Failure to Yield Right of Way at an Intersection	2	1,089.8	0.05%	$324,819	179	16.4258	$298.07	$1,164.54	$42.90	$129.39	$11.38
28	Lane Violation	2	2,717.3	0.13%	$984,550	432	15.8979	$362.32	$765.44	$64.32	$85.05	$9.22
29	No Inspection Sticker	2	7,397.8	0.35%	$2,186,967	1,037	14.0178	$295.63	$201.56	$42.09	$22.40	$4.73
31	Other Non-Criminal Violation	2	9,316.0	0.44%	$3,264,803	1,566	16.8098	$350.45	$190.85	$60.36	$21.21	$4.60
32	Minor Traffic Non-Mass	2	91.8	0.00%	$12,085	6	6.5395	$131.72	$4,429.17	($12.55)	$492.13	$22.18
41	At Fault Loss Amount < $501	3	47.1	0.00%	$3,861	5	10.6195	$82.00	$1,264.70	($21.84)	$79.04	$8.89
42	At Fault Loss Amount $501 - $1,000	3	13,324.4	0.86%	$4,956,810	2,513	13.7139	$270.50	$74.76	$25.28	$4.67	$2.16
43	At Fault Loss Amount $1,001 - $1,500	3	11,163.9	0.52%	$3,025,864	1,548	13.8661	$271.04	$121.69	$25.42	$7.62	$2.76
44	At Fault Loss Amount $1,501 - $2,000	3	7,498.8	0.35%	$2,207,528	1,043	13.9090	$294.39	$216.95	$31.26	$13.56	$3.68
45	At Fault Loss Amount $2,001 - $3,000	4	9,729.9	0.46%	$2,695,242	1,316	13.5253	$277.01	$136.80	$21.53	$5.47	$2.34
46	At Fault Loss Amount $3,001 - $4,000	4	5,240.1	0.25%	$1,696,059	784	14.9616	$323.67	$343.03	$30.86	$13.72	$3.70
47	At Fault Loss Amount $4,001 - $5,000	4	3,022.9	0.14%	$1,061,997	466	15.4156	$351.32	$641.62	$36.39	$25.66	$5.07
48	At Fault Loss Amount $5,001 - $10,000	4	4,375.8	0.21%	$1,686,500	709	16.2029	$385.42	$489.36	$43.21	$19.57	$4.42
49	At Fault Loss Amount >$10,000	4	1,062.9	0.05%	$396,523	146	13.7358	$373.05	$2,877.21	$40.74	$115.09	$10.73
50	2 or More Incidents		37,147.7	1.74%	$20,268,594	8,535	22.9759	$545.62	$83.87			
51	C A R Policy has no matching M.R.B		2,789.3	0.13%	$696,157	402	14.4120	$249.58	$511.99			
	Total		2,129,456.1	100.00%	$402,821,036	205,725	9.6609	$189.17	$0.47			

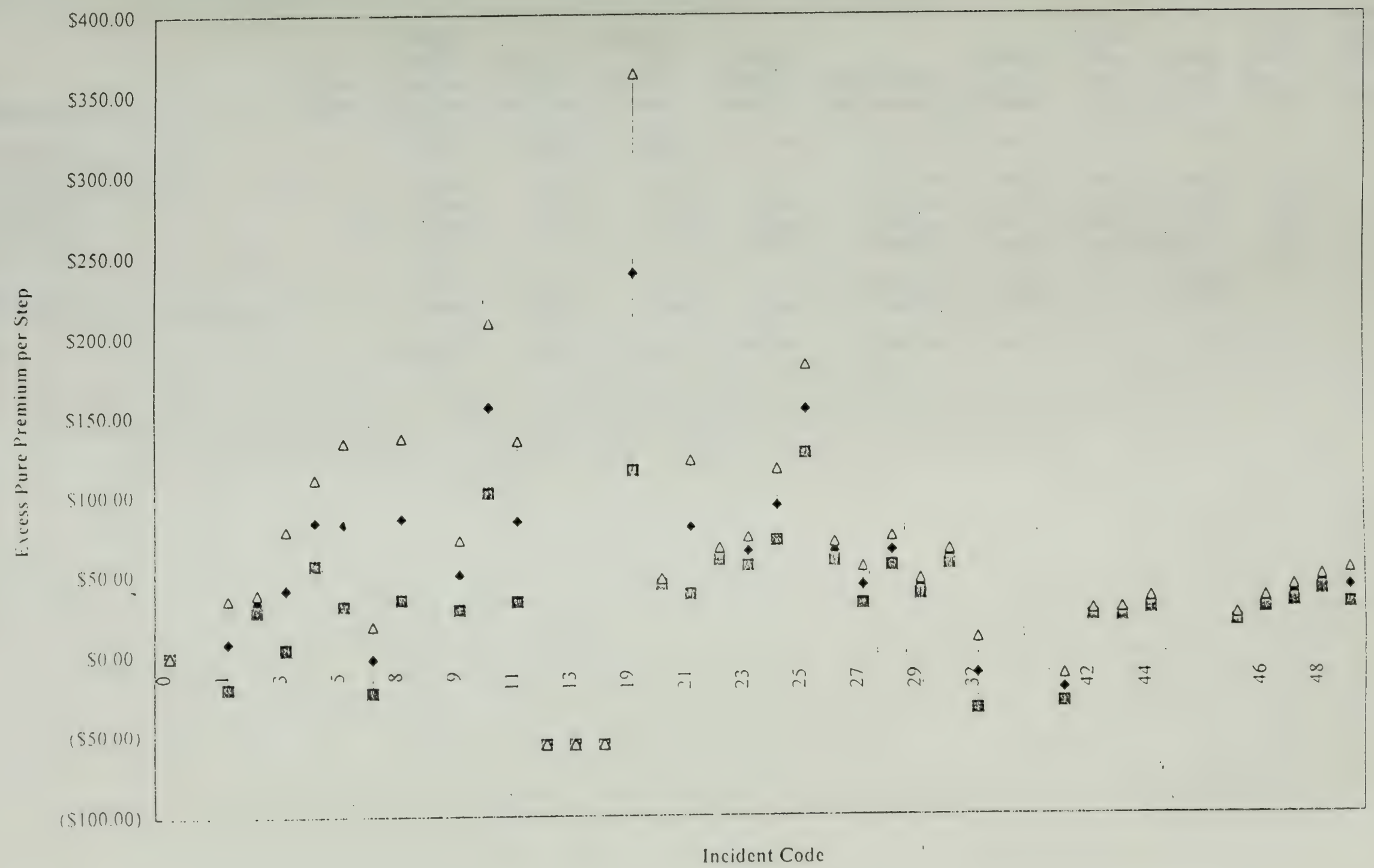
Policy Year 1995 loss data is as of June 30,1996

Violation/Accident

SDIP Collision Incident Detail Excess Pure Premium per Step



Collision Excess Pure Premium per Step with Standard Deviation



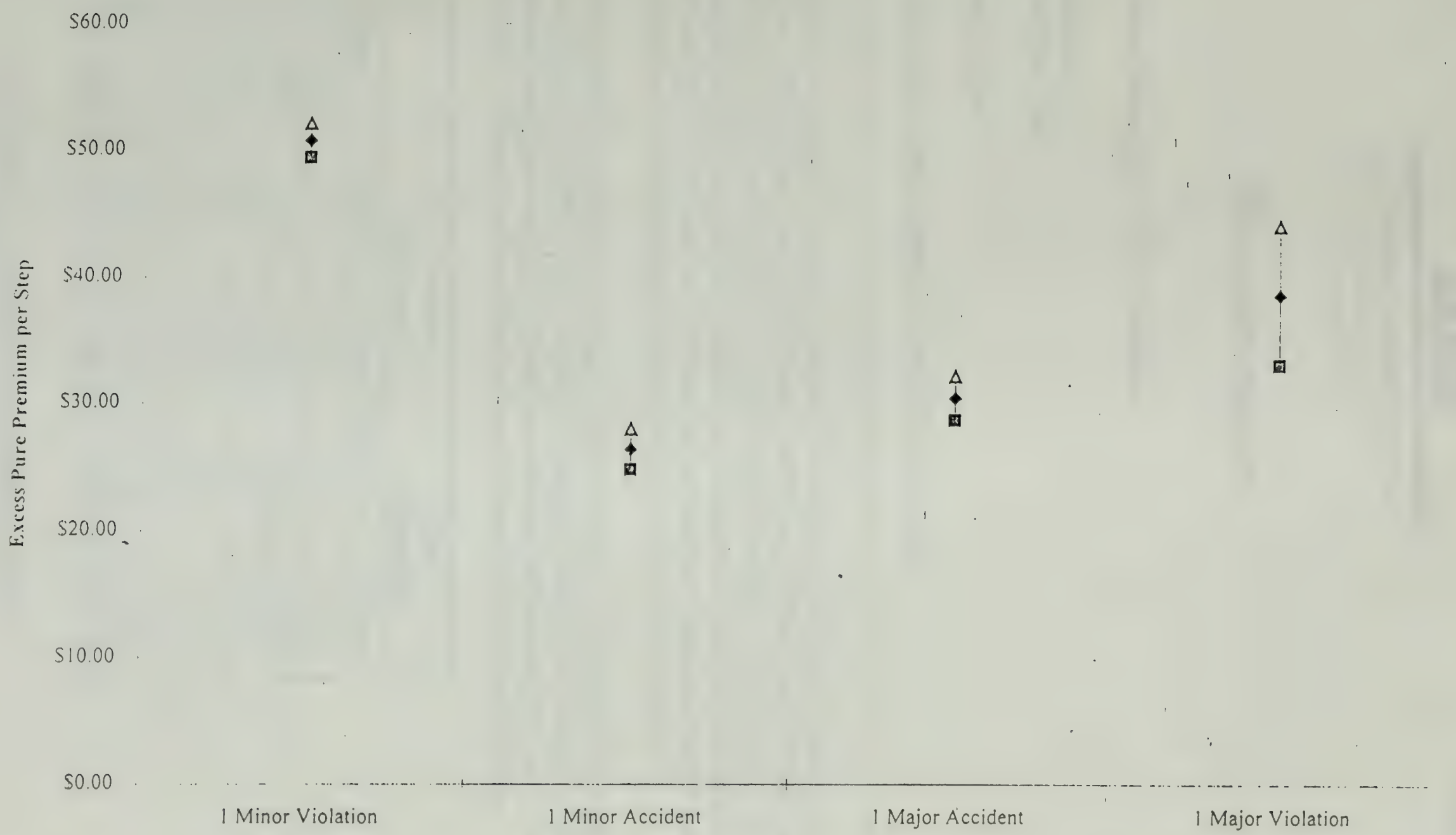
SDIP Collision Violation/Accident Pure Premium Differentials
Summary of Collision Claim and Loss Experience by Incidents in Previous Year
Policy Year 1995 as of 6/30/96
All Classes and Territories Combined

Description of Incident	Step Value	1995 Collision Exposures in Car Years	Exposure Percent Distribution	Policy Year 1995 Collision Claims	Incident Percent Distribution	Policy Year 1995 Collision Losses	Collision Pure Premium	Excess Pure Premium Per Step	Variance of Pure Premium	Variance of Excess Pure Premium	Standard Deviation of Excess Pure Premium
No Incident	-1	1,895,879.3	89.03%	167,996	81.66%	$321,095,651	$169.37		$0.45		
1 Minor Violation	2	130,529.2	6.13%	19,839	9.64%	$41,970,750	$321.54	$50.73	$16.09	$1.79	$1.34
1 Minor Accident	3	37,034.2	1.74%	5,109	2.48%	$10,194,063	$275.26	$26.47	$38.28	$2.39	$1.55
1 Major Accident	4	23,431.6	1.10%	3,421	1.66%	$7,536,321	$321.63	$30.45	$74.49	$2.98	$1.73
1 Major Violation	5	2,644.9	0.12%	423	0.21%	$1,059,500.00	$400.58	$38.54	$1,071.82	$29.77	$5.46
2 or More Incidents		37,147.7	1.74%	8,535	4.15%	$20,268,594	$545.62		$83.87		
No Match between CAR and MRB Records		2,789.3	0.13%	402	0.20%	$696,157	$249.58		$511.99		
Totals		2,129 456.1	100.00%	205,725	100.00%	$402,821,036	$189.17		$0.47		

SDIP Collision Violation/Accident Pure Premium Differentials
Summary of Collision Claim and Loss Experience by Incidents in Previous Year
Policy Year 1995 as of 6/30/96
All Classes and Territories Combined

Description of Incident	Step Value	1995 Collision Exposures in Car Years	Exposure Percent Distribution	Policy Year 1995 Collision Claims	Incident Percent Distribution	Collision Frequency
No Incident	-1	1,895,879.3	89.03%	167,996	81.66%	8.86%
1 Minor Violation	2	130,529.2	6.13%	19,839	9.64%	15.20%
1 Minor Accident	3	37,034.2	1.74%	5,109	2.48%	13.80%
1 Major Accident	4	23,431.6	1.10%	3,421	1.66%	14.60%
1 Major Violation	5	2,644.9	0.12%	423	0.21%	15.99%
2 or More Incidents		37,147.7	1.74%	8,535	4.15%	22.98%
No Match between CAR and MRB Records		2,789.3	0.13%	402	0.20%	14.41%
Totals		2,129,456.1	100.00%	205,725	100.00%	9.66%

SDIP Collision Violation/Accident Excess Pure Premium per Step
Incident Category Summary---Standard Deviation



1997 AIB
SDIP
Exhibit 1

AUTOMOBILE INSURERS BUREAU
OF MASSACHUSETTS
SINCE 1925

Memorandum

TO: Private Passenger Actuarial Committee

FROM: Kim Scott
Rosemary Bray

DATE: May 9, 1996

RE: *TECHNICAL DESCRIPTION OF SDIP ANALYSIS*

The AIB staff has completed its annual review of the SDIP step differentials underlying the current program. This analysis results in indicated Liability and Collision step differentials for each class-territory cell as well as overall indicated step differentials. The indicated step differentials within each cell are also compared with the current statewide SDIP step differentials (7% for Liability and 5% for Collision) to determine the percentage of exposures within each class-territory cell that are overcharged/undercharged under the current SDIP program.

This year's analysis proceeds along the same lines as last year's, although the data used are one year later (Policy Year 1994 as of 6/30/95). Statistical variation and changes in the flat/variable portions of rates generate slightly different indicated step differentials this year. The table below displays the indicated pure premium and rate differentials for the past few years.

	Pure Premium Differentials		Rate Differentials	
Data	Liability	Collision	Liability	Collision
PY 1988	9.2%	8.4%	6.9%	5.2%
PY 1989	8.6%	8.0%	6.7%	4.8%
PY 1990	8.6%	8.8%	7.0%	5.6%
PY 1991	8.6%	9.0%	7.2%	6.3%
PY 1992	8.5%	8.8%	7.3%	6.1%
PY 1993	8.7%	8.6%	7.7%	6.3%
PY 1994	8.4%	8.6%	7.3%	6.4%

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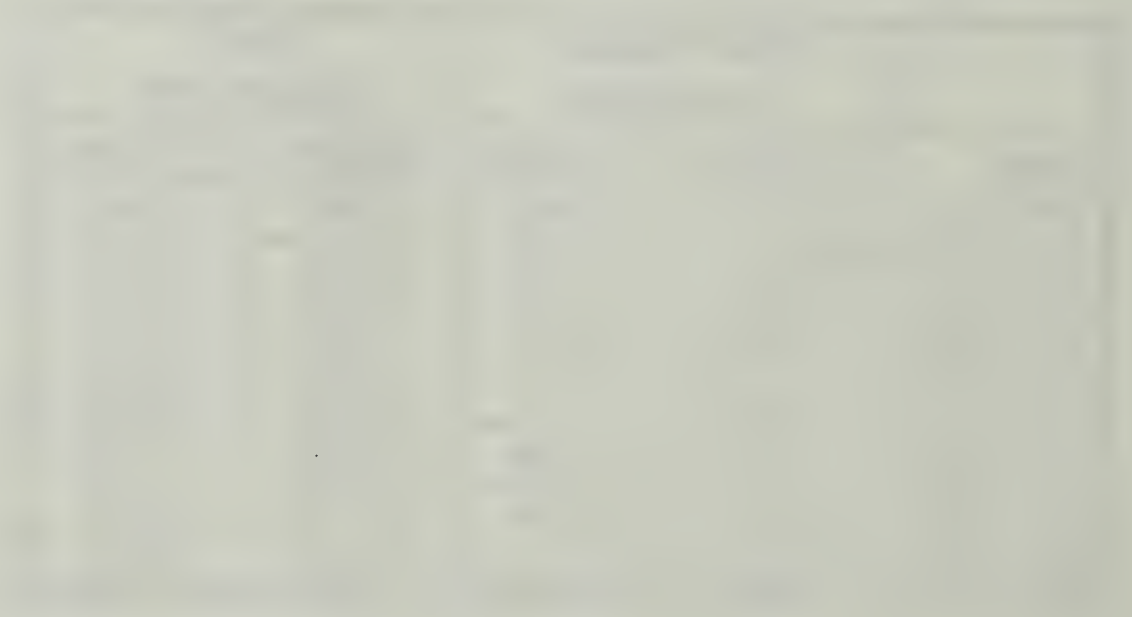

Calculation of Indicated Step Differentials

The first step in calculating indicated step differentials by cell is the regression of actual pure premiums against SDIP step using a weighted linear least-squares method. Indicated pure premium differentials are then calculated using the following formula:

$$Ind.\ Diff. = Slope\ /\ [Y\text{-}Intercept + (Slope\ Coefficient \times 15)]$$

where the indicated pure premium differentials, regression y-intercepts and slope coefficients are calculated for each class and territory. The product of these indicated pure premium differentials and the variable percentage of the average step 15 rates within each cell yields the indicated rate differentials shown on Exhibit 2, Pages 1-2. The variable percentage of the step 15 rates is determined using 1996 Decision average rate components. The variable percentages of the rates by class and territory are shown in Exhibit 3, Pages 1 and 6.

A different method is used to calculate the statewide indicated step differential across all class-territory cells. First, fitted pure premiums are calculated by step, class and territory using the parameters from the weighted least-squares regression discussed above. A multiple regression is then performed on these pure premiums to determine the overall statewide best-fitting step differential, D. The procedure repeatedly tests successive values of D to determine which value of D minimizes the following formula:

$$\sum \{[\ (PP2 - PP1)\ \hat{}2] \times E\}$$

where PP1 is the fitted pure premium by step, class and territory from the weighted least-squares regression described above; E is the number of exposures by step, class and territory; and PP2 is calculated as:

$$PP3 \times [1 - (D \times (15 - step))],$$

where PP3 is the Step 15 fitted pure premium by class and territory from the weighted regression. This is exactly the same approach used in last year's analysis.

It should be noted that this study did not attempt to determine indicated step differentials by territory (across all classes) or indicated step differentials by class (across all territories). This is because of the difficulty of adjusting territory (class) data for the differing mix of classes (territories). The differing mix of classes and territories also complicates the determination of the variable percentage of Step 15 rates across all classes or territories. For these reasons, we have confined our study to the determination of step differentials by class-territory cell and for the state overall. For the state overall, the above procedure yielded indicated rate differentials of 7.3% for liability and 6.4% for Collision as shown on Exhibit 1, Page 1.

Determination of Percentage of Drivers Overcharged/Undercharged

The indicated class-territory step differentials from the weighted least-squares regression provide an indicator of the percentage of drivers overcharged/undercharged within each cell under the current statewide SDIP step differentials. This indicator does not, however, measure the amount by which the cell is overcharged or undercharged, nor does it consider the effects of other subsidies in the rates. Further, the limited exposure volume in each cell makes some of the individual results questionable. In order to determine which drivers are overcharged/undercharged within a cell, the following rules should be applied:

- If the indicated class-territory step differential is higher than the current statewide step differential, then all drivers in SDIP steps below the cell average are overcharged and all drivers in steps above the cell average are undercharged.

- If the indicated class-territory step differential is lower than the current statewide step differential, then all drivers in SDIP steps below the cell average are undercharged and all drivers in steps above the cell average are overcharged.

As an example of the above rules, assume that a class-territory cell has an indicated step differential of 8% for Liability and the average SDIP step within the cell is 15. This indicates that the discount given to a Step 9 driver should be 48% rather than the 42% discount given under the current SDIP program, which uses a 7% step differential. Similarly, a Step 17 driver would receive a 16% surcharge, given an 8% step differential, compared to a 14% surcharge under the current SDIP program. Thus, credit risks are overcharged and surcharge risks are undercharged. Of course, the average step within a cell is generally not 15; the above rules appropriately reflect the effects of SDIP off-balance factors in determining whether or not a particular exposure is overcharged.

It is also possible to determine what fraction of exposures overall are overcharged due to differences between indicated and current step differentials by summing across all class-territory cells; the result overall is that 41.1% of liability exposures are overcharged by various amounts, again excluding the effects of other subsidies.

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1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan

ctermination of Variable and Flat Portions of 1996 Decision Rates

ate Component	A-1	A-2	PDL	Combined Liability	COLL
) Voluntary Loss Pure Premium	$173.94	$52.27	$102.28	$328.49	$143.67
) Commission Expense	$36.32	$11.06	$20.15	$67.53	$29.11
) Premium Tax	2.3%	2.3%	2.3%	-------	2.3%
) Underwriting Profit	-5.4%	-5.4%	-2.1%	-------	-1.5%
) Symbol Drift	-------	-------	-------	-------	-19.5%
) Variable Portion of Avg. Rate					
[(1)+(2)]/[1-(3)-(4)]	$203.86	$61.40	$122.66	$387.92	-------
[(1)/[1-(3)-(4)]] x [1+(5)]	-------	-------	-------	-------	$116.58
) Adjusted Residual Market Load	$20.77	$7.02	$5.78	$33.57	$12.35
) Other Company Expense	$24.66	$7.69	$12.27	$44.62	$20.69
) SDIP Reconcilation/ Insolvency Assessment	-------	-------	$10.54	-------	$10.79
0) Flat Portion of Average Rate					
[[(7)+(8)]/[1-(3)-(4)]] + (9)	$44.05	$14.26	$28.62	$86.93	-------
[[[(2)+(7)+(8)]/[1-(3)-(4)]] x [1 + (5)]] +(9)	-------	-------	-------	-------	$61.22
1) Final Average Rate [(6) + (10)]	$247.91	$75.66	$151.29	$474.86	$177.79
2) Indicated Pure Premium Differential*	-------	-------	-------	8.4%	8.6%
3) Average Step	-------	-------	-------	11.29	11.19
4) Indicated Rate Differential	-------	-------	-------	7.3%	6.4%

* See text for explanation of calculation of indictated pure premium differential.
ndicated Rate Differential is :
(IPPD x var. portion of rate)/(avg. final rate -((15-avg.step) x IPPD x flat port of rate)).

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Final Indicated Rate Differentials
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.0694	0.0756	0.0516	0.0478	0.0769	0.0192	0.0339	0.0104	0.0727
2	0.0642	0.0757	0.0365	0.0211	0.0825	-0.0176	0.1700	0.0948	0.0435
3	0.0650	0.0689	0.0753	0.0368	0.0329	0.0209	0.0745	0.1046	0.0694
4	0.0697	0.0747	0.0766	0.0489	0.0672	0.1288	0.0487	0.0571	0.0585
5	0.0673	0.0779	0.0370	0.0668	0.0136	0.1866	0.1505	0.1085	0.0657
6	0.0749	0.0688	0.0433	0.0243	0.0465	-0.0012	0.1004	0.1123	0.0605
7	0.0640	0.0592	0.0514	0.0930	0.1189	0.0374	0.0310	0.1285	0.0573
8	0.0647	0.0744	0.0404	0.0602	-0.0395	0.0426	0.0636	0.1030	0.0389
9	0.0662	0.1018	0.0448	0.0898	0.0371	0.1016	0.1134	0.0421	0.0510
10	0.0675	0.0927	0.0536	0.1080	0.0707	0.0504	0.0182	0.0466	-0.0312
11	0.0663	0.0655	0.0363	0.0504	0.0459	0.0660	0.1476	0.0823	0.0494
12	0.0658	0.0694	0.0455	0.0354	0.0329	-0.0407	0.0880	0.0484	0.0151
13	0.0740	0.0752	0.0299	0.0417	0.1043	0.0157	0.1399	0.0195	0.0644
14	0.0730	0.0780	0.0481	0.0520	0.0989	0.0431	0.0915	0.1095	0.1075
15	0.0684	0.0810	0.0594	0.0396	0.1001	0.0333	0.1391	0.0277	0.0607
16	0.0725	0.0919	-0.0058	0.0220	0.0779	-0.0405	0.0259	-0.0970	-0.0529
17	0.0701	0.0167	0.0137	0.0142	0.0282	0.3720	-0.0563	-0.1704	0.0915
18	0.0504	0.0526	0.0560	-0.0282	-0.0971	-0.1134	-0.0732	0.0230	0.0435
19	0.0597	0.0784	-0.0726	0.0130	-0.1158	-0.0091	-0.2545	-0.0735	0.0057
20	0.0666	0.0411	0.0074	0.1135	0.3548	-0.0228	0.2041	0.3379	0.0645
21	0.0674	0.0830	0.0252	-0.0930	0.1348	-0.0105	0.0614	0.1619	0.1432
22	0.0558	0.1018	0.0720	-0.0248	0.0909	0.6764	0.2215	0.7777	-0.1590
23	0.0727	0.0685	-0.0255	0.3457	0.1771	-0.0621	0.0893	0.3511	0.1009
24	0.0410	0.0696	0.0192	0.0648	0.1930	0.1013	-0.0469	-0.1359	0.1290
25	0.0628	0.0894	0.0158	0.0887	0.2083	-0.0693	-0.0429	0.0919	0.0720
26	0.0532	0.0976	0.0961	0.0207	0.0913	0.3329	-0.1132	-0.0095	0.0062
27	0.0605	0.0624	0.0775	-0.0238	0.0380	-0.0668	0.0871	0.0936	0.0684

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Final Indicated Rate Differentials
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.0555	0.0537	0.0454	0.0402	-0.0322	0.0291	-0.0348	0.0738	0.0549
2	0.0530	0.0530	0.0349	0.0284	0.1125	0.0099	0.0750	0.1626	0.0497
3	0.0547	0.0529	0.0772	0.0458	0.0563	0.0068	0.1109	0.0973	0.0440
4	0.0538	0.0514	0.0544	0.0302	0.1700	0.0868	0.0436	0.0512	0.0337
5	0.0550	0.0612	0.0421	0.0333	0.0197	-0.0466	0.0522	0.1127	0.0544
6	0.0541	0.0578	0.0650	0.0235	-0.0378	-0.0715	0.1607	0.1155	0.0590
7	0.0529	0.0561	0.0613	0.0657	0.1669	0.0568	0.0534	0.0963	0.0552
8	0.0542	0.0587	0.0351	0.0433	0.0413	0.0127	0.0758	0.0692	0.0465
9	0.0495	0.0614	0.0319	0.0358	-0.0215	0.0841	0.0603	0.0952	-0.0435
10	0.0602	0.0535	0.0465	0.0588	0.2661	0.0357	0.0301	0.0675	0.0442
11	0.0568	0.0615	0.0386	0.0416	0.2334	0.0481	0.1516	0.1396	0.0288
12	0.0559	0.0607	0.0478	0.0510	0.1817	-0.0065	0.1102	0.1070	-0.0033
13	0.0590	0.0639	0.0414	0.0537	0.1223	0.1297	0.2902	0.0612	0.0458
14	0.0612	0.0627	0.0560	0.0525	0.0732	0.1699	0.1335	0.0371	0.0289
15	0.0655	0.0684	0.0549	0.0689	0.0887	0.1183	0.0973	0.0059	0.0342
16	0.0650	0.0267	0.0051	-0.0108	0.2523	-0.0195	0.1894	-0.0967	-0.1061
17	0.0599	0.0707	0.1415	0.1648	-0.1361	0.0840	0.0568	-0.0984	0.0597
18	0.0592	0.0311	-0.0017	-0.0748	-0.0103	0.1752	0.0990	0.2487	0.0365
19	0.0344	-0.0315	-0.0189	0.0580	-0.0482	0.0076	-0.3298	-0.0747	0.0285
20	0.0704	0.0621	-0.0257	0.0939	0.2334	-0.0150	0.3315	0.4723	0.1164
21	0.0613	0.0760	0.0551	0.0694	-0.0086	0.0163	0.0741	0.1091	0.1008
22	0.0884	0.0667	0.1447	-0.0707	0.1300	0.6217	-0.2204	0.7388	-3.0532
23	0.0541	0.0721	-0.0129	0.0689	-0.1016	0.0380	-0.0792	0.1462	0.1203
24	0.0429	0.0560	0.0197	0.0262	0.0052	0.2327	0.2256	-0.0748	0.1071
25	0.0557	0.0497	0.0146	0.0506	-0.0474	-0.1357	0.0697	-0.0540	0.0769
26	0.0721	0.0783	0.0439	0.1139	0.1490	0.3710	-0.1085	0.0552	0.0865
27	0.0532	0.0499	0.0829	0.0195	0.1017	0.0074	0.0254	0.1151	0.0529

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Percentage of Exposures Overcharged Due to Current SDIP
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	28.66%	74.90%	38.94%	43.13%	76.75%	22.15%	21.91%	19.89%	64.44%
2	28.83%	75.02%	39.29%	41.86%	79.61%	22.05%	77.26%	80.18%	35.73%
3	29.17%	23.68%	61.00%	42.28%	20.47%	23.68%	79.72%	81.47%	34.40%
4	29.25%	74.96%	62.82%	40.60%	22.66%	78.58%	21.38%	18.39%	36.41%
5	30.40%	82.22%	40.22%	43.41%	21.19%	77.37%	77.70%	79.60%	36.81%
6	70.67%	23.93%	38.52%	43.49%	21.23%	22.17%	79.65%	81.85%	36.59%
7	29.78%	24.79%	38.90%	68.07%	80.01%	24.79%	20.06%	82.03%	36.39%
8	30.21%	74.65%	37.50%	31.93%	20.34%	23.19%	19.79%	81.07%	37.09%
9	28.95%	74.78%	36.69%	57.96%	19.28%	81.21%	80.26%	16.29%	35.10%
10	30.41%	74.78%	34.28%	60.34%	82.71%	24.36%	20.19%	17.48%	33.19%
11	31.27%	19.29%	42.57%	40.29%	15.83%	23.17%	79.26%	82.00%	37.42%
12	32.83%	19.11%	37.84%	33.82%	18.69%	20.03%	80.38%	19.62%	38.65%
13	70.12%	81.69%	42.75%	40.82%	47.14%	15.47%	81.18%	18.30%	33.81%
14	68.02%	81.01%	42.62%	43.00%	83.09%	22.29%	81.86%	82.64%	62.80%
15	30.46%	80.78%	33.71%	32.33%	83.20%	20.57%	82.34%	18.27%	36.59%
16	66.86%	82.28%	36.19%	39.93%	84.90%	14.70%	20.45%	17.84%	39.43%
17	70.55%	18.59%	40.18%	41.68%	19.13%	42.88%	19.18%	18.74%	71.03%
18	34.60%	18.99%	37.57%	34.84%	56.85%	23.34%	19.33%	64.92%	36.61%
19	34.25%	79.10%	33.96%	47.84%	48.64%	25.47%	22.94%	22.92%	38.60%
20	34.57%	18.25%	39.82%	62.65%	47.58%	24.73%	80.86%	86.29%	32.73%
21	33.81%	76.82%	37.29%	39.64%	84.88%	19.76%	20.92%	82.68%	64.52%
22	34.37%	73.25%	67.52%	40.20%	51.13%	77.64%	41.78%	45.48%	46.74%
23	65.00%	23.59%	39.76%	60.70%	40.81%	28.49%	78.24%	78.24%	61.69%
24	35.61%	20.82%	37.37%	44.70%	81.93%	77.56%	22.80%	18.05%	57.92%
25	32.09%	76.18%	35.88%	66.75%	41.96%	28.84%	39.70%	85.73%	66.46%
26	31.59%	81.34%	63.82%	34.28%	39.33%	77.78%	18.41%	20.68%	33.89%
27	27.93%	24.59%	61.66%	41.32%	19.08%	19.15%	78.14%	82.23%	32.29%

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Percentage of Exposures Overcharged Due to Current SDIP
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	71.08%	73.40%	38.52%	33.01%	25.25%	21.38%	24.18%	78.87%	64.54%
2	71.14%	73.80%	38.17%	42.46%	79.58%	23.59%	73.44%	78.96%	36.01%
3	71.04%	75.09%	61.55%	31.45%	78.13%	21.50%	76.94%	80.59%	33.30%
4	70.95%	81.91%	64.17%	41.34%	77.66%	77.23%	23.73%	81.01%	36.37%
5	69.79%	81.36%	38.76%	44.05%	21.20%	24.53%	73.43%	78.93%	63.07%
6	70.87%	74.81%	62.43%	44.84%	20.65%	25.57%	73.85%	80.92%	63.98%
7	70.41%	81.92%	62.50%	67.49%	77.13%	74.07%	74.79%	81.13%	64.83%
8	70.33%	81.65%	36.19%	31.81%	20.18%	23.28%	77.42%	79.59%	36.22%
9	31.31%	81.71%	34.83%	31.18%	18.65%	78.94%	77.11%	82.11%	35.49%
10	70.06%	81.56%	42.81%	60.82%	53.91%	23.00%	23.13%	82.25%	31.94%
11	68.97%	80.27%	41.50%	42.20%	81.48%	25.17%	76.74%	81.20%	36.78%
12	67.98%	80.39%	37.20%	66.66%	79.89%	20.40%	75.01%	79.95%	37.22%
13	70.15%	80.73%	41.47%	57.73%	48.37%	38.14%	77.54%	81.13%	32.07%
14	68.23%	80.62%	56.83%	67.20%	82.77%	77.36%	77.64%	18.51%	35.35%
15	69.67%	80.33%	65.79%	69.64%	82.36%	76.89%	78.43%	19.41%	36.68%
16	68.31%	18.90%	33.07%	37.46%	84.98%	12.41%	78.71%	16.32%	38.32%
17	70.99%	81.36%	60.74%	68.91%	42.61%	47.08%	74.04%	18.97%	72.47%
18	66.43%	19.53%	41.35%	34.97%	19.31%	75.44%	75.33%	35.31%	38.34%
19	34.23%	20.86%	35.37%	54.81%	15.71%	23.25%	46.71%	27.02%	39.28%
20	65.08%	81.89%	30.31%	61.58%	49.89%	26.93%	48.12%	85.21%	71.45%
21	65.70%	76.62%	61.59%	57.90%	52.37%	21.83%	53.53%	83.79%	63.83%
22	64.19%	71.21%	65.52%	46.03%	84.93%	70.34%	23.29%	45.90%	48.54%
23	64.98%	74.95%	42.63%	59.57%	16.29%	37.85%	23.50%	77.88%	62.45%
24	35.82%	79.61%	34.74%	47.37%	21.31%	76.01%	52.33%	14.81%	58.07%
25	68.56%	24.78%	36.11%	66.59%	63.46%	32.92%	59.48%	11.97%	63.53%
26	69.90%	80.43%	38.32%	68.06%	81.30%	69.23%	22.58%	76.93%	70.21%
27	71.71%	25.93%	61.70%	41.96%	82.82%	20.15%	25.14%	80.84%	67.01%

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Estimated Variable Portion of the Rates
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.7078	0.7078	0.8571	0.7712	0.9150	0.8277	0.9150	0.8277	0.7123
2	0.7276	0.7276	0.8620	0.7831	0.9233	0.8501	0.9233	0.8501	0.7342
3	0.7406	0.7406	0.8698	0.7904	0.9264	0.8599	0.9264	0.8599	0.7483
4	0.7528	0.7528	0.8789	0.8045	0.9285	0.8650	0.9285	0.8650	0.7585
5	0.7700	0.7700	0.8851	0.8172	0.9304	0.8771	0.9304	0.8771	0.7729
6	0.7736	0.7736	0.8902	0.8321	0.9315	0.8864	0.9315	0.8864	0.7890
7	0.7857	0.7857	0.8981	0.8399	0.9345	0.8975	0.9345	0.8975	0.8077
8	0.8073	0.8073	0.8997	0.8369	0.9348	0.8974	0.9348	0.8974	0.7970
9	0.8082	0.8082	0.9055	0.8512	0.9357	0.9022	0.9357	0.9022	0.8012
10	0.8212	0.8212	0.9147	0.8694	0.9357	0.9083	0.9357	0.9083	0.8185
11	0.8356	0.8356	0.9169	0.8621	0.9357	0.9093	0.9357	0.9093	0.8344
12	0.8464	0.8464	0.9223	0.8768	0.9357	0.9211	0.9357	0.9211	0.8384
13	0.8511	0.8511	0.9280	0.8892	0.9357	0.9229	0.9357	0.9229	0.8487
14	0.8822	0.8822	0.9299	0.8949	0.9357	0.9241	0.9357	0.9241	0.8455
15	0.8912	0.8912	0.9328	0.8901	0.9357	0.9283	0.9357	0.9283	0.8603
16	0.9132	0.9132	0.9328	0.9244	0.9357	0.9315	0.9357	0.9315	0.8912
17	0.8075	0.8075	0.9136	0.8543	0.9357	0.8985	0.9357	0.8985	0.8132
18	0.8800	0.8800	0.9267	0.8772	0.9357	0.9180	0.9357	0.9180	0.8329
19	0.8944	0.8944	0.9290	0.8882	0.9357	0.9228	0.9357	0.9228	0.8454
20	0.8984	0.8984	0.9289	0.8830	0.9357	0.9221	0.9357	0.9221	0.8483
21	0.9207	0.9207	0.9340	0.9196	0.9357	0.9329	0.9357	0.9329	0.8856
22	0.9239	0.9239	0.9357	0.9224	0.9357	0.9350	0.9357	0.9350	0.8928
23	0.8514	0.8514	0.9290	0.8903	0.9357	0.9241	0.9357	0.9241	0.8361
24	0.8733	0.8733	0.9234	0.8757	0.9357	0.9139	0.9357	0.9139	0.8335
25	0.8627	0.8627	0.9300	0.8862	0.9357	0.9250	0.9357	0.9250	0.8553
26	0.8931	0.8931	0.9348	0.9016	0.9357	0.9306	0.9357	0.9306	0.8666
27	0.6817	0.6817	0.8549	0.7700	0.9151	0.8200	0.9151	0.8200	0.6828

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Indicated Pure Premium Differentials
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.098	0.107	0.060	0.062	0.084	0.023	0.037	0.013	0.102
2	0.088	0.104	0.042	0.027	0.089	-0.021	0.184	0.112	0.059
3	0.088	0.093	0.087	0.047	0.036	0.024	0.080	0.122	0.093
4	0.093	0.099	0.087	0.061	0.072	0.149	0.053	0.066	0.077
5	0.087	0.101	0.042	0.082	0.015	0.213	0.162	0.124	0.085
6	0.097	0.089	0.049	0.029	0.050	-0.001	0.108	0.127	0.077
7	0.081	0.075	0.057	0.111	0.127	0.042	0.033	0.143	0.071
8	0.080	0.092	0.045	0.072	-0.042	0.048	0.068	0.115	0.049
9	0.082	0.126	0.050	0.106	0.040	0.113	0.121	0.047	0.064
10	0.082	0.113	0.059	0.124	0.076	0.056	0.020	0.051	-0.038
11	0.079	0.078	0.040	0.059	0.049	0.073	0.158	0.091	0.059
12	0.078	0.082	0.049	0.040	0.035	-0.044	0.094	0.053	0.018
13	0.087	0.088	0.032	0.047	0.112	0.017	0.150	0.021	0.076
14	0.083	0.088	0.052	0.058	0.106	0.047	0.098	0.119	0.127
15	0.077	0.091	0.064	0.045	0.107	0.036	0.149	0.030	0.071
16	0.079	0.101	-0.006	0.024	0.083	-0.044	0.028	-0.104	-0.059
17	0.087	0.021	0.015	0.017	0.030	0.414	-0.060	-0.190	0.113
18	0.057	0.060	0.060	-0.032	-0.104	-0.124	-0.078	0.025	0.052
19	0.067	0.088	-0.078	0.015	-0.124	-0.010	-0.272	-0.080	0.007
20	0.074	0.046	0.008	0.129	0.379	-0.025	0.218	0.366	0.076
21	0.073	0.090	0.027	-0.101	0.144	-0.011	0.066	0.174	0.162
22	0.060	0.110	0.077	-0.027	0.097	0.723	0.237	0.832	-0.178
23	0.085	0.080	-0.027	0.388	0.189	-0.067	0.095	0.380	0.121
24	0.047	0.080	0.021	0.074	0.206	0.111	-0.050	-0.149	0.155
25	0.073	0.104	0.017	0.100	0.223	-0.075	-0.046	0.099	0.084
26	0.060	0.109	0.103	0.023	0.098	0.358	-0.121	-0.010	0.007
27	0.089	0.092	0.091	-0.031	0.042	-0.082	0.095	0.114	0.100

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Slope Coefficients of Weighted Linear Regression
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	35.49	55.49	26.35	21.62	58.22	14.55	27.28	6.40	43.34
2	35.04	55.24	26.53	15.84	133.46	-15.12	200.67	65.44	18.51
3	33.95	48.84	44.81	14.37	42.31	14.50	91.17	68.84	36.17
4	39.50	56.05	54.78	26.59	90.74	107.14	49.27	51.28	30.53
5	39.27	58.94	28.87	36.02	24.63	199.12	170.38	71.18	38.91
6	46.06	49.92	33.41	16.10	74.29	-1.29	120.34	91.17	37.10
7	37.16	38.27	40.34	71.60	228.01	44.51	38.26	129.21	40.62
8	43.16	58.40	34.94	40.31	-86.88	61.22	91.85	103.17	19.55
9	40.67	124.15	41.41	73.98	66.10	129.21	167.45	46.90	33.74
10	49.72	97.42	51.35	109.41	138.76	70.08	20.83	41.23	-19.10
11	47.76	42.13	45.13	39.70	104.40	104.53	210.03	71.28	30.40
12	48.22	52.38	50.08	30.52	70.06	-54.54	117.21	52.99	8.80
13	61.08	47.24	33.17	29.72	275.12	28.93	251.22	25.32	60.56
14	69.97	66.31	62.27	44.83	275.36	72.25	183.79	117.89	122.91
15	70.98	85.78	93.27	37.28	257.18	88.79	360.40	38.35	35.72
16	94.60	77.45	-8.08	27.01	287.58	-84.52	48.71	-121.69	-22.60
17	47.97	13.24	11.19	7.49	73.04	96.24	-61.49	-217.76	61.81
18	56.02	23.15	112.93	-21.97	-253.25	-79.06	-147.90	15.71	16.67
19	70.17	58.71	-87.35	15.66	-318.67	-26.08	-576.84	-167.24	3.65
20	87.22	35.80	7.51	67.63	2,138.50	-72.56	175.53	300.03	87.35
21	97.17	85.61	56.51	-97.27	535.35	-34.10	206.94	178.94	201.32
22	83.68	202.02	224.47	-35.79	282.94	1,118.24	603.02	629.28	-51.05
23	62.02	58.24	-40.63	462.86	708.20	-105.32	68.59	247.39	53.17
24	30.81	56.14	29.42	88.99	507.98	166.10	-89.09	-97.87	96.46
25	53.48	63.58	15.31	26.55	263.82	-118.33	-89.82	68.49	61.98
26	52.17	145.12	176.43	9.50	198.52	472.88	-159.27	-15.97	5.52
27	26.20	39.88	53.48	-7.00	55.06	-58.17	76.43	48.20	26.98

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Y - Intercepts of Weighted Linear Regression
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	-170.13	-312.78	42.45	24.27	-179.82	409.62	328.85	409.93	-225.27
2	-128.79	-298.11	228.69	348.19	-509.75	956.08	-1,920.05	-394.81	35.16
3	-122.72	-208.01	-154.86	92.75	555.60	378.05	-233.79	-466.98	-152.75
4	-165.99	-276.31	-192.83	38.19	-108.03	-887.36	199.42	7.89	-62.10
5	-139.84	-301.68	257.62	-99.24	1,318.27	-2,050.86	-1,502.85	-492.41	-125.96
6	-214.96	-187.35	186.31	310.68	372.94	912.99	-688.60	-648.17	-72.57
7	-100.63	-66.30	99.89	-427.20	-1,627.99	400.28	578.93	-1,036.02	-36.00
8	-109.35	-242.61	253.72	-44.36	3,356.65	369.83	-27.90	-649.01	107.08
9	-113.46	-876.08	215.19	-408.32	679.72	-790.77	-1,129.86	301.19	24.61
10	-140.88	-598.72	105.84	-760.42	-245.66	212.50	753.69	184.77	787.00
11	-113.91	-94.54	463.68	83.07	562.19	-127.32	-1,818.74	-281.43	57.79
12	-103.28	-147.10	264.50	297.53	938.67	2,052.02	-511.19	214.84	356.90
13	-213.27	-173.98	531.75	187.95	-1,660.05	1,272.62	-2,087.75	822.76	-110.68
14	-203.26	-244.35	269.42	98.90	-1,526.32	465.70	-877.30	-773.46	-876.53
15	-139.62	-342.85	64.18	279.29	-1,454.45	1,141.64	-2,981.52	713.25	-29.98
16	-228.11	-392.01	1,431.41	728.01	-863.15	3,211.62	1,025.97	2,994.89	719.39
17	-167.01	442.20	578.61	339.16	1,333.50	-1,211.16	1,943.82	4,414.59	-377.90
18	137.38	48.84	175.51	1,012.78	6,239.54	1,826.27	4,109.29	393.57	69.29
19	-2.12	-210.41	2,428.63	838.28	7,355.47	3,028.30	10,773.03	4,606.41	492.84
20	-131.01	243.97	822.89	-488.10	-26,438.43	4,028.03	-1,828.25	-3,681.51	-161.43
21	-129.65	-334.08	1,247.18	2,421.10	-4,314.70	3,525.95	51.59	-1,653.38	-1,774.71
22	129.27	-1,196.64	-446.77	1,867.16	-1,330.83	-15,227.81	-6,497.25	-8,682.67	1,052.40
23	-204.10	-148.93	2,091.09	-5,750.98	-6,881.71	3,146.16	-309.86	-3,059.71	-357.02
24	194.03	-137.96	970.12	-132.99	-5,157.43	-992.38	3,116.04	2,126.32	-823.82
25	-67.34	-340.03	669.70	-132.94	-2,771.85	3,354.55	3,309.14	-338.29	-193.80
26	92.57	-848.55	-930.33	271.17	-943.96	-5,771.07	3,704.76	1,805.49	692.66
27	-97.97	-162.22	-212.10	331.58	499.43	1,586.03	-343.44	-300.69	-135.43

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Coefficients of Determination of Weighted Linear Regression
Liability

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.883	0.144	0.285	0.117	0.041	0.004	0.012	0.005	0.205
2	0.881	0.291	0.292	0.021	0.145	0.008	0.117	0.207	0.162
3	0.897	0.440	0.597	0.090	0.029	0.007	0.076	0.168	0.226
4	0.883	0.181	0.474	0.214	0.058	0.128	0.128	0.106	0.087
5	0.878	0.685	0.170	0.324	0.005	0.111	0.036	0.317	0.353
6	0.826	0.593	0.396	0.053	0.055	0.000	0.293	0.176	0.304
7	0.821	0.245	0.374	0.207	0.142	0.028	0.037	0.200	0.269
8	0.924	0.541	0.476	0.156	0.148	0.052	0.103	0.203	0.302
9	0.704	0.659	0.158	0.079	0.030	0.030	0.157	0.024	0.036
10	0.799	0.181	0.173	0.166	0.099	0.013	0.008	0.070	0.092
11	0.794	0.235	0.083	0.067	0.033	0.048	0.159	0.103	0.089
12	0.840	0.366	0.306	0.090	0.050	0.147	0.142	0.046	0.030
13	0.744	0.305	0.040	0.044	0.149	0.003	0.153	0.014	0.127
14	0.858	0.428	0.326	0.273	0.205	0.064	0.076	0.155	0.363
15	0.740	0.397	0.149	0.069	0.156	0.031	0.120	0.015	0.084
16	0.555	0.291	0.002	0.006	0.104	0.031	0.007	0.260	0.043
17	0.251	0.006	0.003	0.001	0.002	0.301	0.051	0.516	0.169
18	0.414	0.136	0.081	0.005	0.087	0.181	0.162	0.002	0.041
19	0.421	0.179	0.178	0.002	0.153	0.001	0.389	0.184	0.000
20	0.368	0.026	0.003	0.128	0.577	0.003	0.128	0.261	0.050
21	0.486	0.337	0.096	0.112	0.167	0.001	0.041	0.201	0.296
22	0.273	0.257	0.082	0.005	0.083	0.157	0.191	0.519	0.069
23	0.705	0.195	0.011	0.171	0.126	0.165	0.068	0.082	0.071
24	0.377	0.021	0.007	0.053	0.173	0.092	0.033	0.129	0.288
25	0.291	0.547	0.003	0.049	0.241	0.032	0.069	0.023	0.044
26	0.423	0.264	0.094	0.002	0.077	0.016	0.384	0.000	0.001
27	0.785	0.327	0.312	0.014	0.021	0.026	0.097	0.216	0.056

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Estimated Variable Portion of the Rates
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.5779	0.5779	0.7836	0.6595	0.8478	0.7451	0.8478	0.7451	0.5906
2	0.5893	0.5893	0.7929	0.6759	0.8525	0.7632	0.8525	0.7632	0.6135
3	0.5877	0.5877	0.7875	0.6829	0.8532	0.7546	0.8532	0.7546	0.5951
4	0.5978	0.5978	0.7998	0.6868	0.8544	0.7750	0.8544	0.7750	0.6232
5	0.6178	0.6178	0.8101	0.6928	0.8557	0.7772	0.8557	0.7772	0.6257
6	0.6146	0.6146	0.8129	0.7114	0.8595	0.7854	0.8595	0.7854	0.6479
7	0.6303	0.6303	0.8172	0.7140	0.8605	0.7891	0.8605	0.7891	0.6345
8	0.6380	0.6380	0.8157	0.7347	0.8611	0.7953	0.8611	0.7953	0.6459
9	0.6261	0.6261	0.8191	0.7162	0.8611	0.7864	0.8611	0.7864	0.6491
10	0.6684	0.6684	0.8306	0.7354	0.8611	0.7939	0.8611	0.7939	0.6600
11	0.6687	0.6687	0.8388	0.7437	0.8611	0.8023	0.8611	0.8023	0.6701
12	0.6819	0.6819	0.8382	0.7494	0.8611	0.8109	0.8611	0.8109	0.6657
13	0.6945	0.6945	0.8450	0.7672	0.8611	0.8157	0.8611	0.8157	0.6933
14	0.7121	0.7121	0.8480	0.7839	0.8611	0.8246	0.8611	0.8246	0.7048
15	0.7282	0.7282	0.8574	0.8016	0.8611	0.8393	0.8611	0.8393	0.7271
16	0.7225	0.7225	0.8469	0.7707	0.8611	0.8126	0.8611	0.8126	0.6980
17	0.6734	0.6734	0.8423	0.7456	0.8611	0.8002	0.8611	0.8002	0.6788
18	0.7406	0.7406	0.8535	0.7872	0.8611	0.8263	0.8611	0.8263	0.7164
19	0.7325	0.7325	0.8592	0.8056	0.8611	0.8389	0.8611	0.8389	0.7312
20	0.7575	0.7575	0.8577	0.8029	0.8611	0.8359	0.8611	0.8359	0.7324
21	0.8167	0.8167	0.8611	0.8469	0.8611	0.8587	0.8611	0.8587	0.7879
22	0.8343	0.8343	0.8611	0.8520	0.8611	0.8611	0.8611	0.8611	0.7974
23	0.7207	0.7207	0.8611	0.8204	0.8611	0.8449	0.8611	0.8449	0.7424
24	0.7271	0.7271	0.8547	0.7933	0.8611	0.8309	0.8611	0.8309	0.7237
25	0.7527	0.7527	0.8611	0.8162	0.8611	0.8431	0.8611	0.8431	0.7465
26	0.7832	0.7832	0.8611	0.8315	0.8611	0.8490	0.8611	0.8490	0.7592
27	0.5425	0.5425	0.7819	0.6501	0.8474	0.7427	0.8474	0.7427	0.5508

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Indicated Pure Premium Differentials
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.096	0.093	0.058	0.061	-0.038	0.039	-0.041	0.099	0.093
2	0.090	0.090	0.044	0.042	0.132	0.013	0.088	0.213	0.081
3	0.093	0.090	0.098	0.067	0.066	0.009	0.130	0.129	0.074
4	0.090	0.086	0.068	0.044	0.199	0.112	0.051	0.066	0.054
5	0.089	0.099	0.052	0.048	0.023	-0.060	0.061	0.145	0.087
6	0.088	0.094	0.080	0.033	-0.044	-0.091	0.187	0.147	0.091
7	0.084	0.089	0.075	0.092	0.194	0.072	0.062	0.122	0.087
8	0.085	0.092	0.043	0.059	0.048	0.016	0.088	0.087	0.072
9	0.079	0.098	0.039	0.050	-0.025	0.107	0.070	0.121	-0.067
10	0.090	0.080	0.056	0.080	0.309	0.045	0.035	0.085	0.067
11	0.085	0.092	0.046	0.056	0.271	0.060	0.176	0.174	0.043
12	0.082	0.089	0.057	0.068	0.211	-0.008	0.128	0.132	-0.005
13	0.085	0.092	0.049	0.070	0.142	0.159	0.337	0.075	0.066
14	0.086	0.088	0.066	0.067	0.085	0.206	0.155	0.045	0.041
15	0.090	0.094	0.064	0.086	0.103	0.141	0.113	0.007	0.047
16	0.090	0.037	0.006	-0.014	0.293	-0.024	0.220	-0.119	-0.152
17	0.089	0.105	0.168	0.221	-0.158	0.105	0.066	-0.123	0.088
18	0.080	0.042	-0.002	-0.095	-0.012	0.212	0.115	0.301	0.051
19	0.047	-0.043	-0.022	0.072	-0.056	0.009	-0.383	-0.089	0.039
20	0.093	0.082	-0.030	0.117	0.271	-0.018	0.385	0.565	0.159
21	0.075	0.093	0.064	0.082	-0.010	0.019	0.086	0.127	0.128
22	0.106	0.080	0.168	-0.083	0.151	0.722	-0.256	0.858	-3.829
23	0.075	0.100	-0.015	0.084	-0.118	0.045	-0.092	0.173	0.162
24	0.059	0.077	0.023	0.033	0.006	0.280	0.262	-0.090	0.148
25	0.074	0.066	0.017	0.062	-0.055	-0.161	0.081	-0.064	0.103
26	0.092	0.100	0.051	0.137	0.173	0.437	-0.126	0.065	0.114
27	0.098	0.092	0.106	0.030	0.120	0.010	0.030	0.155	0.096

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Slope Coefficients of Weighted Linear Regression
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	18.04	15.99	18.08	12.27	-23.59	15.61	-18.74	24.70	19.04
2	17.62	15.59	16.19	7.29	102.40	3.97	51.43	55.56	16.20
3	17.63	15.50	30.76	13.63	36.39	3.08	71.12	33.87	11.85
4	18.08	14.81	24.18	8.22	114.57	37.79	21.25	17.34	8.38
5	18.42	21.24	19.44	9.15	20.96	-32.82	30.06	41.72	17.00
6	17.90	18.30	28.40	8.25	-32.21	-36.49	93.08	43.99	19.39
7	16.98	17.11	31.73	22.13	173.74	34.33	33.93	38.00	17.30
8	19.54	19.10	18.23	15.22	45.53	8.56	54.82	27.10	15.76
9	15.20	20.96	14.63	7.37	-12.59	72.58	45.49	40.49	-7.99
10	26.12	16.40	27.75	20.08	346.81	27.38	18.51	33.88	12.16
11	22.96	20.15	26.85	14.44	308.19	24.16	126.31	61.38	11.25
12	21.12	21.44	32.26	20.50	178.79	-5.85	69.98	51.45	-0.68
13	26.01	22.25	28.36	23.93	129.86	148.88	203.95	33.02	20.10
14	27.12	20.82	36.42	22.91	99.75	119.30	123.95	16.27	9.88
15	31.51	24.16	31.61	33.67	82.21	82.78	102.95	2.74	6.64
16	32.41	5.90	3.97	-5.00	275.93	-19.22	205.03	-45.59	-22.01
17	21.90	26.68	109.06	56.93	-174.77	12.68	26.84	-45.54	32.59
18	29.65	7.74	-1.18	-12.31	-4.50	25.29	28.76	73.12	10.96
19	13.23	-5.19	-7.22	34.53	-27.28	7.95	-247.34	-65.18	3.70
20	38.77	19.51	-11.83	40.29	391.48	-15.15	111.51	223.60	38.16
21	37.95	25.42	52.38	45.88	-14.75	8.63	68.40	47.34	69.84
22	66.90	41.79	233.98	-37.15	250.78	689.38	-397.75	520.24	-5.13
23	23.10	33.31	-12.60	30.87	-261.63	44.96	-48.15	54.79	56.10
24	18.48	22.14	21.59	13.25	8.81	242.34	274.32	-13.22	46.03
25	25.55	12.29	6.33	13.11	-27.20	-73.51	82.46	-20.08	31.99
26	50.67	46.08	42.20	85.75	382.19	236.19	-161.02	47.37	50.59
27	16.55	14.80	33.44	3.98	53.49	3.38	13.72	39.71	11.71

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Y - Intercepts of Weighted Linear Regression
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	-82.18	-67.89	38.52	15.50	977.56	164.69	734.30	-121.58	-81.48
2	-68.17	-59.79	128.12	63.29	-761.06	242.38	-185.52	-572.78	-42.43
3	-75.74	-61.04	-146.42	-1.22	5.43	299.81	-520.49	-244.86	-18.08
4	-70.45	-50.17	-8.53	64.76	-1,143.81	-228.35	94.06	3.10	29.16
5	-69.77	-105.01	82.04	52.45	587.12	1,043.50	42.02	-338.66	-58.84
6	-66.16	-80.77	-71.59	122.81	1,223.54	947.40	-898.83	-361.04	-77.89
7	-52.93	-63.49	-55.27	-90.60	-1,709.50	-40.81	40.61	-257.57	-60.90
8	-62.92	-78.33	146.87	28.55	260.41	402.39	-196.99	-94.37	-16.13
9	-35.33	-100.26	155.81	36.81	697.92	-409.83	-29.70	-272.67	239.68
10	-103.15	-41.44	74.93	-51.43	-4,080.74	191.23	252.77	-110.91	-1.52
11	-74.70	-82.36	183.47	41.86	-3,485.00	39.68	-1,176.35	-568.51	95.62
12	-59.14	-79.98	81.22	-6.35	-1,835.67	802.75	-501.85	-381.01	154.89
13	-84.64	-91.70	156.73	-16.87	-1,034.83	-1,295.68	-2,454.06	-53.73	3.28
14	-91.84	-76.41	3.14	-2.83	-316.70	-1,211.31	-1,061.25	116.84	91.06
15	-122.28	-104.83	20.14	-113.95	-435.13	-653.88	-635.30	365.88	42.00
16	-126.33	70.14	657.13	426.71	-3,197.23	1,103.25	-2,143.49	1,066.26	475.30
17	-83.68	-147.26	-986.46	-596.82	3,725.92	-69.64	6.99	1,053.13	-117.20
18	-73.37	67.09	781.27	314.25	448.13	-260.09	-180.53	-853.52	48.70
19	80.15	197.14	433.02	-37.62	898.72	784.19	4,355.40	1,708.53	38.49
20	-163.86	-53.56	568.69	-259.77	-4,427.09	1,081.91	-1,383.15	-2,958.41	-332.71
21	-65.20	-108.94	38.29	-129.34	1,647.77	327.76	-235.24	-337.82	-500.82
22	-373.12	-104.06	-2,112.99	1,003.00	-2,097.44	-9,386.19	7,518.07	-7,197.01	78.28
23	-37.07	-165.59	1,013.51	-96.78	6,150.19	334.29	1,246.17	-505.75	-494.09
24	34.82	-46.22	631.90	198.43	1,272.98	-2,769.15	-3,066.16	344.46	-380.35
25	-38.70	2.74	268.32	13.77	905.26	1,559.78	-219.37	615.46	-170.20
26	-209.01	-230.11	198.07	-658.71	-3,518.47	-3,002.34	3,692.99	23.00	-314.98
27	-78.89	-61.60	-186.43	73.47	-354.95	283.88	258.41	-338.97	-54.25

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Coefficients of Determination of Weighted Linear Regression
Collision

	Class								
Territory	10	15	17	18	20	21	25	26	30
1	0.848	0.393	0.300	0.145	0.031	0.013	0.077	0.156	0.288
2	0.840	0.692	0.152	0.067	0.298	0.001	0.162	0.504	0.044
3	0.812	0.323	0.508	0.064	0.029	0.004	0.125	0.195	0.133
4	0.869	0.498	0.362	0.153	0.025	0.109	0.057	0.199	0.073
5	0.924	0.556	0.307	0.177	0.008	0.164	0.138	0.469	0.400
6	0.726	0.652	0.517	0.064	0.141	0.288	0.311	0.120	0.126
7	0.876	0.499	0.517	0.306	0.119	0.054	0.035	0.413	0.208
8	0.833	0.578	0.220	0.308	0.025	0.012	0.248	0.224	0.263
9	0.644	0.729	0.130	0.050	0.007	0.021	0.036	0.212	0.078
10	0.701	0.529	0.110	0.101	0.321	0.023	0.019	0.112	0.147
11	0.784	0.605	0.063	0.058	0.194	0.089	0.297	0.148	0.086
12	0.877	0.212	0.334	0.184	0.111	0.001	0.162	0.271	0.002
13	0.804	0.446	0.131	0.083	0.176	0.041	0.045	0.079	0.129
14	0.806	0.304	0.218	0.185	0.262	0.258	0.033	0.055	0.118
15	0.739	0.582	0.177	0.107	0.111	0.105	0.098	0.002	0.058
16	0.596	0.144	0.000	0.005	0.146	0.003	0.117	0.073	0.247
17	0.550	0.043	0.167	0.048	0.359	0.009	0.012	0.130	0.033
18	0.304	0.064	0.000	0.155	0.002	0.053	0.068	0.055	0.019
19	0.210	0.026	0.009	0.024	0.094	0.000	0.311	0.301	0.010
20	0.556	0.272	0.031	0.170	0.320	0.002	0.077	0.689	0.322
21	0.752	0.439	0.226	0.076	0.002	0.007	0.058	0.129	0.122
22	0.257	0.169	0.232	0.028	0.140	0.227	0.187	0.661	0.090
23	0.547	0.276	0.011	0.076	0.325	0.024	0.260	0.076	0.089
24	0.398	0.142	0.010	0.014	0.001	0.224	0.082	0.031	0.163
25	0.308	0.105	0.008	0.017	0.012	0.073	0.028	0.125	0.222
26	0.473	0.318	0.123	0.032	0.177	0.069	0.277	0.015	0.122
27	0.816	0.334	0.306	0.027	0.104	0.001	0.021	0.208	0.149

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Policy Year 1994 Adjusted Total Market Exposures — Car Years
Liability

	Class									
Territory	10	15	17	18	20	21	25	26	30	Total
1	120,214	24,341	4,119	2,433	363	485	1,942	4,127	3,555	161,578
2	181,790	33,841	6,597	3,722	606	717	2,599	6,266	5,237	241,374
3	207,978	42,745	8,701	3,533	884	895	3,133	5,826	5,412	279,107
4	204,170	39,847	7,267	3,919	749	838	2,488	6,247	4,921	270,446
5	242,518	53,071	8,281	4,489	783	852	3,282	7,025	6,741	327,042
6	223,802	40,678	9,389	3,321	980	835	3,985	5,983	4,555	293,528
7	176,612	32,586	7,348	2,936	700	664	3,104	4,916	3,955	232,821
8	235,657	48,913	9,439	3,721	1,142	1,049	3,191	5,298	4,655	313,064
9	64,638	13,012	2,627	838	299	222	1,041	1,495	1,162	85,335
10	60,853	12,896	2,317	1,085	313	291	714	1,358	1,029	80,855
11	71,559	13,351	2,240	1,120	342	297	620	1,226	1,385	92,141
12	103,820	24,291	3,814	1,746	693	489	1,347	2,131	1,456	139,787
13	50,673	11,777	1,774	884	370	242	744	956	670	68,089
14	112,585	20,419	4,004	1,749	971	561	1,425	1,842	1,482	145,039
15	59,385	14,646	1,807	707	608	306	632	791	712	79,592
16	12,782	2,971	452	208	230	75	177	189	84	17,170
17	9,852	2,615	228	210	37	41	53	231	204	13,469
18	8,979	1,486	244	139	71	46	55	110	127	11,256
19	9,054	1,030	176	112	61	36	32	72	180	10,754
20	8,868	1,896	239	123	73	46	71	137	91	11,544
21	21,965	3,426	891	281	422	153	163	213	233	27,747
22	3,731	712	177	44	112	26	19	16	23	4,859
23	20,304	1,640	586	236	143	83	52	102	558	23,703
24	15,221	1,572	625	225	105	74	56	95	265	18,237
25	5,988	980	154	86	54	22	46	67	92	7,490
26	9,288	1,687	296	129	91	34	82	101	140	11,846
27	90,342	20,370	3,228	1,611	316	421	1,245	2,637	3,152	123,323
Total	2,332,627	466,796	87,021	39,607	11,517	9,801	32,297	59,456	52,073	3,091,195

Merit Rating Board Policy Year 1994 Data valued at 6/30/95

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Policy Year 1994 Adjusted Total Market Exposures --- Car Years
Collision

	Class									
Territory	10	15	17	18	20	21	25	26	30	Total
1	86,680	18,330	2,204	1,872	108	331	658	3,206	2,739	116,129
2	130,671	25,353	3,524	2,855	211	465	865	4,861	4,072	172,876
3	141,772	31,377	4,555	2,585	268	553	979	4,259	3,958	190,306
4	146,669	30,034	3,907	3,001	275	535	872	4,748	3,864	193,906
5	173,927	40,889	4,601	3,467	257	539	1,138	5,414	5,198	235,429
6	150,186	29,306	4,960	2,344	295	478	1,148	4,128	3,298	196,143
7	120,482	24,017	3,938	2,125	241	395	906	3,491	2,882	158,475
8	159,529	36,065	5,239	2,696	418	635	1,099	3,742	3,527	212,952
9	41,049	9,083	1,368	548	101	123	319	995	802	54,387
10	41,342	9,589	1,280	769	122	172	255	936	746	55,211
11	47,391	9,887	1,243	803	138	196	230	873	1,008	61,768
12	62,567	17,161	1,868	1,177	246	271	434	1,438	1,040	86,201
13	29,124	7,683	854	570	131	143	241	608	454	39,807
14	64,884	14,014	1,983	1,129	357	303	435	1,159	987	85,252
15	32,751	9,831	882	436	216	166	191	480	453	45,406
16	6,160	1,913	194	122	46	35	56	122	54	8,700
17	7,127	2,073	117	154	18	28	20	170	167	9,873
18	5,435	1,100	122	98	24	29	25	75	87	6,994
19	5,136	779	81	84	18	19	13	58	137	6,324
20	5,387	1,354	126	87	33	29	24	102	58	7,198
21	12,162	2,196	447	195	161	99	63	143	162	15,628
22	1,875	417	77	27	37	12	6	10	14	2,475
23	13,914	1,177	383	179	80	60	32	83	442	16,350
24	9,478	1,099	401	173	52	50	28	65	171	11,517
25	3,467	662	80	59	25	13	14	41	55	4,416
26	5,045	1,077	138	78	32	20	34	55	97	6,575
27	60,123	14,371	1,727	1,160	106	282	411	1,915	2,182	82,274
Total	1,564,331	340,837	46,298	28,791	4,015	5,978	10,494	43,176	38,651	2,082,571

Merit Rating Board Policy Year 1994 Data valued at 6/30/95

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Policy Year 1994 Adjusted Total Market Losses
Liability

Territory	Class 10	15	17	18	20	21	25	26	30	Total
1	$26,894,489	$5,750,134	$1,776,514	$790,997	$261,138	$308,556	$1,453,572	$2,098,412	$981,968	$40,315,780
2	$47,349,037	$8,457,101	$4,090,271	$2,112,146	$944,693	$515,283	$3,041,046	$3,331,800	$1,320,792	$71,662,169
3	$53,223,404	$11,733,855	$4,361,341	$1,035,204	$1,065,982	$541,604	$3,620,850	$3,430,998	$1,445,073	$80,458,311
4	$55,853,073	$11,207,898	$4,365,092	$1,581,843	$970,231	$647,266	$2,371,713	$4,942,503	$1,460,743	$83,400,362
5	$73,047,034	$15,298,417	$5,669,175	$1,800,203	$1,330,831	$903,188	$3,673,320	$4,250,665	$2,236,379	$108,209,212
6	$66,917,165	$12,506,419	$6,361,358	$1,777,864	$1,487,016	$745,739	$4,566,477	$4,473,553	$1,664,276	$100,499,867
7	$55,606,001	$10,263,485	$5,093,853	$1,721,764	$1,298,151	$728,283	$3,603,472	$4,647,187	$1,745,108	$84,707,304
8	$88,186,993	$16,650,564	$7,189,237	$1,947,140	$2,307,569	$1,393,025	$4,369,018	$4,943,968	$1,574,804	$128,562,318
9	$21,768,680	$4,700,414	$2,140,321	$523,749	$505,107	$264,648	$1,460,609	$1,518,335	$482,360	$33,364,223
10	$25,202,088	$4,829,295	$1,918,091	$802,269	$574,333	$379,070	$764,363	$1,104,490	$583,009	$36,157,008
11	$30,222,007	$4,414,897	$2,451,276	$703,139	$731,170	$444,924	$861,201	$987,904	$579,264	$41,395,782
12	$46,463,105	$9,281,261	$3,758,490	$1,277,824	$1,398,596	$589,362	$1,717,972	$2,194,631	$671,785	$67,353,026
13	$23,512,582	$3,520,979	$1,764,509	$531,920	$903,823	$415,286	$1,264,888	$1,155,854	$394,544	$33,464,385
14	$65,738,892	$8,623,463	$4,548,600	$1,262,258	$2,561,456	$882,550	$2,683,631	$1,875,218	$854,660	$89,030,728
15	$38,691,189	$7,644,865	$2,480,668	$571,213	$1,489,804	$767,503	$1,560,649	$1,027,551	$278,923	$54,512,365
16	$10,677,454	$1,139,261	$594,975	$230,106	$795,850	$145,771	$313,466	$217,188	$37,362	$14,151,433
17	$3,578,342	$1,504,284	$167,068	$92,954	$89,383	$8,196	$52,930	$258,812	$65,583	$5,817,552
18	$6,994,655	$495,594	$413,673	$98,120	$176,700	$28,605	$99,896	$69,382	$34,165	$8,410,790
19	$7,220,940	$401,994	$219,203	$118,458	$158,295	$93,546	$67,357	$138,993	$96,744	$8,515,530
20	$7,691,073	$1,146,697	$221,690	$53,793	$366,341	$133,816	$58,120	$114,283	$79,383	$9,865,196
21	$21,391,452	$1,899,921	$1,794,634	$306,732	$1,567,927	$460,320	$519,233	$219,883	$128,035	$28,288,137
22	$4,055,149	$674,910	$445,559	$59,781	$324,710	$46,075	$46,369	$6,940	$10,361	$5,669,854
23	$10,278,529	$753,131	$906,556	$184,794	$533,556	$123,464	$38,361	$74,387	$149,789	$13,042,567
24	$8,354,629	$678,978	$850,794	$250,053	$262,703	$116,999	$98,477	$61,495	$103,178	$10,777,306
25	$3,109,895	$284,394	$135,013	$18,612	$58,470	$33,435	$92,948	$47,380	$49,483	$3,829,630
26	$6,285,012	$1,042,218	$432,018	$51,601	$183,579	$46,112	$107,553	$157,899	$105,651	$8,411,643
27	$17,224,049	$4,749,849	$1,819,823	$378,934	$423,748	$287,529	$1,030,230	$1,152,602	$544,015	$27,610,779
Total	$825,536,918	$149,654,278	$65,969,802	$20,283,471	$22,771,162	$11,050,155	$39,537,721	$45,002,313	$17,677,437	$1,197,483,257

Merit Rating Board Policy Year 1994 Data valued at 6/30/95

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Policy Year 1994 Adjusted Total Market Losses
Collision

	Class									
Territory	10	15	17	18	20	21	25	26	30	Total
1	$10,198,042	$1,673,704	$668,922	$350,846	$65,865	$134,427	$293,294	$834,581	$377,987	$14,597,668
2	$16,594,011	$2,424,045	$1,283,055	$469,609	$171,757	$141,192	$531,542	$1,386,517	$598,305	$23,600,033
3	$17,010,052	$2,917,479	$1,367,348	$485,043	$151,333	$192,161	$555,066	$1,178,709	$468,625	$24,325,816
4	$19,052,612	$2,947,210	$1,315,819	$533,007	$174,131	$192,009	$365,830	$1,274,290	$491,902	$26,346,810
5	$23,682,219	$4,442,938	$1,683,688	$623,896	$233,853	$284,184	$579,510	$1,656,270	$732,258	$33,918,816
6	$19,930,983	$2,978,121	$1,695,535	$557,658	$218,810	$178,452	$610,769	$1,295,604	$490,619	$27,956,551
7	$16,384,734	$2,593,093	$1,590,970	$473,886	$232,258	$195,843	$510,282	$1,139,690	$401,907	$23,522,663
8	$24,657,627	$4,088,463	$2,143,664	$653,233	$400,089	$340,936	$702,596	$1,207,410	$592,401	$34,786,419
9	$5,408,293	$995,795	$497,906	$76,939	$51,258	$86,645	$210,740	$344,207	$117,773	$7,789,556
10	$7,728,577	$1,177,909	$590,936	$171,551	$134,672	$105,880	$136,008	$380,964	$101,904	$10,528,401
11	$8,635,008	$1,202,808	$688,289	$193,620	$165,165	$81,410	$175,033	$324,026	$229,868	$11,695,227
12	$11,291,630	$2,355,808	$1,010,195	$337,771	$228,224	$192,871	$251,993	$588,523	$152,760	$16,409,775
13	$5,920,637	$1,016,882	$467,929	$180,256	$118,744	$133,698	$152,555	$273,407	$104,716	$8,368,824
14	$13,781,151	$1,869,647	$1,006,551	$360,316	$425,380	$187,489	$355,188	$423,177	$203,159	$18,612,058
15	$7,469,349	$1,375,291	$410,703	$157,050	$176,762	$104,331	$177,218	$195,879	$54,475	$10,121,058
16	$1,448,618	$247,697	$138,472	$43,487	$43,858	$28,638	$52,867	$45,451	$11,297	$2,060,385
17	$1,122,530	$251,388	$55,090	$31,280	$20,498	$3,245	$8,211	$61,800	$41,555	$1,595,597
18	$1,432,356	$160,313	$94,696	$14,092	$9,187	$3,634	$6,961	$17,388	$15,835	$1,754,462
19	$1,186,768	$112,202	$27,425	$36,481	$8,191	$17,254	$8,441	$37,997	$11,238	$1,445,997
20	$1,515,813	$193,986	$50,828	$25,600	$42,843	$24,746	$6,795	$42,839	$6,326	$1,909,776
21	$4,461,028	$342,525	$335,621	$97,737	$230,647	$45,363	$49,922	$52,094	$49,825	$5,664,762
22	$743,952	$143,943	$80,177	$12,469	$64,116	$16,036	$8,380	$4,260	$270	$1,073,603
23	$3,163,283	$218,149	$323,799	$60,310	$174,321	$64,744	$15,990	$28,326	$73,089	$4,122,011
24	$2,345,101	$195,245	$366,960	$66,453	$73,172	$50,624	$28,282	$9,479	$32,587	$3,167,903
25	$831,996	$82,564	$28,054	$10,907	$12,626	$5,617	$13,696	$12,692	$11,711	$1,009,863
26	$1,780,859	$255,983	$106,884	$37,012	$73,592	$11,955	$41,293	$41,251	$24,481	$2,373,310
27	$6,217,830	$1,233,070	$509,204	$148,856	$47,542	$94,757	$193,733	$521,220	$173,067	$9,139,279
Total	$233,995,059	$37,496,258	$18,538,720	$6,209,365	$3,748,894	$2,918,141	$6,042,195	$13,378,051	$5,569,940	$327,896,623

Merit Rating Board Policy Year 1994 Data valued at 6/30/95

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Liability

SDIP Step	1994 Liability Exposures	% Distribution
9	1,550,136.3	49.01%
10	477,886.8	15.11%
11	110,008.9	3.48%
12	58,976.8	1.86%
13	280,358.6	8.86%
14	218,322.8	6.90%
15	193,687.6	6.12%
16	49,880.8	1.58%
17	45,717.8	1.45%
18	41,641.7	1.32%
19	30,538.0	0.97%
20	20,360.8	0.64%
21	16,899.4	0.53%
22	13,453.0	0.43%
23	10,973.0	0.35%
24	8,581.3	0.27%
25	7,026.2	0.22%
26	5,494.1	0.17%
27	4,565.8	0.14%
28	3,518.3	0.11%
29	2,957.3	0.09%
30	2,347.1	0.07%
31	1,819.5	0.06%
32	1,441.0	0.05%
33	1,220.7	0.04%
34	964.9	0.03%
35	4,239.6	0.13%
Total	3,163,018.0	100.00%

Average Liability SDIP Step 11.29

1997 Massachusetts Private Passenger Automobile
Safe Driver Insurance Plan Analysis
Collision

SDIP Step	1994 Collision Exposures	% Distribution
9	1,042,753.1	49.75%
10	324,101.7	15.46%
11	69,974.4	3.34%
12	35,971.0	1.72%
13	188,999.7	9.02%
14	144,354.0	6.89%
15	116,346.1	5.55%
16	32,486.7	1.55%
17	30,143.0	1.44%
18	27,571.7	1.32%
19	19,830.6	0.95%
20	12,687.2	0.61%
21	10,477.7	0.50%
22	8,262.0	0.39%
23	6,714.2	0.32%
24	5,184.8	0.25%
25	4,066.8	0.19%
26	3,149.3	0.15%
27	2,594.7	0.12%
28	2,021.4	0.10%
29	1,671.0	0.08%
30	1,272.8	0.06%
31	1,012.1	0.05%
32	784.9	0.04%
33	672.3	0.03%
34	528.4	0.03%
35	2,203.8	0.11%
Total	2,095,835.1	100.00%
Average Collision SDIP Step		11.19

Increasing Safety on the Road: A Review of the Massachusetts Safe Driver Insurance Plan (SDIP)

'repared for:

,inda Ruthardt
'ommissioner of Insurance

Respectfully submitted by:

Ralph Iannaco
Chairman
SDIP Task Force

,DIP

.sk Force

August 1996

COMMONWEALTH OF MASSACHUSETTS
DIVISION OF INSURANCE
470 Atlantic Avenue • Boston, MA 02210-2223

WILLIAM F. WELD
GOVERNOR

ARGEO PAUL CELLUCCI
LIEUTENANT GOVERNOR

LINDA RUTHARDT
COMMISSIONER

Dear Commissioner Ruthardt:

In August of 1976, as a result of the enactment of the *Merit Rating Surcharge Law,* I had the opportunity to meet with the Chairmen of the Joint Legislative Insurance Committee and the cosponsors of the legislation, Senator Daniel Foley and Representative Raymond LaFontaine. The legislative intent of the law, according to their interpretation, was to reward "good or safe drivers" by granting credits towards their insurance premiums and to surcharge those drivers receiving motor vehicle citations or determined to be more than 50 percent at fault in motor vehicle accidents. Today this concept still holds true. The SDIP does in fact provide for all operators achieving the best credit step, Step 9, to receive at least a 42 percent reduction in their mandatory coverages and a 30 percent reduction in their optional coverages.

I would like to thank you, Commissioner, for affording me the opportunity to work with many dedicated individuals on a project that allowed us to be *proactive* rather than *reactive.* We feel the recommendations in this report will further provide a *fair* playing field for the citizens of the Commonwealth.

My sincere appreciation to the following; **Mary Ann Mulhall** of the **Merit Rating Board** for her continued support and expertise, conducting studies and surveys, and providing specialized data used for analysis in various reports, **Donna Brennan,** also of the **Merit Rating Board,** for her historical knowledge and contributions in coordinating the technical questionnaire, the **State Rating Bureau's Steve D'Amato** for his insightful ideas, advice, and counsel, **Bob MacNicholl** for the detailed analysis of many of the recommendations developed by the Task Force, **Craig Spratt** for his valuable and thoughtful review of this report, and **Burt Feinberg** for his enthusiasm and analytical expertise, and from the **Division of Insurance, Joseph Mulkern** for his legal research and memoranda, **Michael Goetz** for the energy and ideas he brought to the Task Force, and especially his efforts in coordinating this report, **Daniel Arndt** for all of his contributions, outline, comparative study, and greatly appreciated writing and editing skills, to **Ada Maria Barry** for her patience, dedication to this project and most importantly her commitment to excellence, and a special thanks to **Mary Carroll, Dianne Senkel,** and **Theresa Sacco** for assisting in the production of this report.

On behalf of the Massachusetts Division of Insurance and the Massachusetts Merit Rating Board, I hereby submit this report with the hope that the recommendations set forth will enhance the SDIP by furthering its goals of encouraging safe driving.

Respectfully,

Ralph A. Iannaco
Deputy Commissioner and Chief of Staff
August 1996

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INTRODUCTION

Commissioner of Insurance Linda Ruthardt requested that the Massachusetts Division of Insurance and the Massachusetts Motor Vehicle Insurance-Merit Rating Board (MRB) conduct an overall review of the Safe Driver Insurance Plan (SDIP, also referred to as "the Plan") and provide her with a report of recommendations by focusing on the following goals and objectives: (1) increasing incentives for safe driving, (2) utilizing technology to increase efficiency and improve access to data both within the Commonwealth and from other jurisdictions, (3) encouraging safe driving by increasing public awareness and education of the SDIP, (4) ensuring the consistent and equal application of the Plan, and (5) ensuring that the Plan is more user friendly. The Division of Insurance and the Merit Rating Board thereafter reconvened the SDIP Task Force which was initially established in 1992. This Task Force had reviewed and successfully addressed specific concerns relative to the appellate functions of the Board of Appeal as well as certain aspects of the Plan itself. [1]

The reconvened SDIP Task Force is comprised of and has benefited from the experience and knowledge of a wide variety of individuals and organizations. A working group was formed and this report is the product of their time and effort.

Numerous ideas and comments were solicited from a wide variety of sources both from within and outside of the Task Force.[2] No idea was rejected out-of-hand nor was any embraced without careful review. To determine the feasibility and desirability of the various proposals, several studies were commissioned by the Task Force. In order to evaluate the "aging process," to consider the elimination of the "clean slate rule," and to analyze the impact of a Commissioner's Excellent Driving Award, a statistical analysis was prepared by Robert MacNicholl, Deputy Director of the State Rating Bureau (SRB).[3] To generate new ideas and provide a comparative analysis of similarly situated jurisdictions, a comparative study was prepared by Daniel Arndt, Esq. of the Division of Insurance.[4] To identify patterns of unsafe driving, quarterly reports of motor vehicle violations from all law enforcement jurisdictions within the Commonwealth were provided by Mary Ann Mulhall, Director of the Merit Rating Board. In addition, Joseph Mulkern, Esq. of the Division of Insurance reviewed and analyzed concerns related to consistent legal policy and its application within the SDIP.[5]

The agencies of the Commonwealth that oversee and implement the Plan, the Division of Insurance and the Merit Rating Board, hereby submit the following report in the belief that the recommendations contained herein will continue to ensure that the Safe Driver Insurance Plan remain fair and consistent, provide incentives for safe driving, and continue

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[1] See SDIP Task Force Accomplishments.
[2] See Appendix, I. Issues For Consideration.
[3] See Appendix, II. *Test Of Changes To Current SDIP Point Assignments*.
[4] See Appendix, III. *Study Of Other Jurisdictions' Automobile Insurance Systems*.
[5] See Appendix, IV. *Encouraging Consistency For Consumers*.

to provide an environment for SDIP-based rate deviations for the benefit of the Commonwealth's consumers and insurers.

SDIP HISTORY

Ensuring safety on our roads has become a significant goal of governmental bodies worldwide. Many jurisdictions have moved towards automobile insurance "risk classification" plans as a major tool in fostering this goal. Since this trend began, Massachusetts has been in the forefront of applying this approach.

In 1976, the Legislature created a Merit Rating Surcharge System. The intent was to reward "good" drivers with a discount on their insurance premiums and to apply a surcharge to "bad" drivers. Points were assigned and then applied to driving history records based upon various motor vehicle violations and at-fault accidents. A credit of approximately $20 was applied to those drivers with good driving records.

In 1983, *The Automobile Insurance Reform Act* authorized the Commissioner of Insurance to establish a Safe Driver Insurance Plan. This Plan provided for credits resulting in lower premiums for those drivers who experienced incident-free years, and surcharges resulting in higher premiums for those drivers who were determined to be more than 50 percent at fault in automobile accidents, and/or were convicted of certain motor vehicle violations. A driver's history of accidents and violations has been accepted as a good indicator of a driver's potential risk. In 1983, the Plan called for a three year experience period, and the credit grew to a maximum of $40.

From 1984 to 1989, the Plan was modified by making changes to the credits and the experience period. By the end of 1989, credits ranged from $90 to $120 for property damage liability coverage.

In 1990, the Plan was revised and modeled after the European "bonus/malus" concept. The new SDIP offered several critical changes. First, the concept of a growing ladder of steps was established, in that, the experience period of the SDIP would be lengthened with each year, thus allowing larger credits to drivers with more incident-free driving experience. This Plan now provided greater incentives and increased benefits to this driving population. The idea of credit steps and surcharge steps was also introduced. The ladder of steps consists of a neutral Step 15, credit Steps 9 to 14 and surcharge Steps 16 to 35. All drivers begin at Step 15, and then move up or down the ladder according to the number of surcharge points and incident-free driving years on their driving records. Each step is assigned a seven percent surcharge or credit for liability coverage and a five percent surcharge or credit for collision coverage. Beginning in 1990, the experience period was set at six years, with the intention of lengthening it in subsequent years. This was also the reason why the best credit step was established at Step 9; the Plan was meant to grow, so that in 1991, the best step would be Step 8, then the next year, Step 7, and so forth. In 1991, new legislation was enacted which capped the experience period at six years. In

order to ease the transition from a three to a six year experience period, the Plan also included a "clean slate rule" which moved drivers who were in surcharge status (Steps 16 to 35) to credit Step 14 if they maintained three consecutive incident-free years.

In 1995, as a result of the recommendations of the SDIP Task Force, several changes were implemented. Most notably, the thresholds for the two existing categories, minor and major at-fault accidents, were changed. The thresholds were increased from $200 to $500 for minor at-fault accidents and from $1,500 to $2,000 for major at-fault accidents.

As of January 1, 1996, approximately 60 percent of all drivers had an opportunity to avail themselves of at least a ten percent discount in their automobile insurance premiums due to their SDIP steps being 9 or 10 and the downward rate deviations filed by many insurers. The willingness of insurers to offer premium discounts to insureds based on the SDIP's risk classifications suggests that the SDIP steps are, indeed, a good indicator of a driver's potential insurance risk.

SDIP TASK FORCE ACCOMPLISHMENTS

Proposals

In 1992, a SDIP Task Force was created to review the SDIP with specific emphasis on the appellate functions of the Board of Appeal on Motor Vehicle Liability Policies and Bonds (the Board of Appeal). The Task Force reviewed the Board of Appeal's methods and procedures for expediting the appeal process.

The following recommendations were proposed by the Task Force: (1) implementation of administrative reviews of certain weather-related accidents, (2) acceptance of written affidavits in lieu of personal appearances for Board of Appeal surcharge hearings, (3) repromulgation of the Standards of Fault, (4) revision of the Surcharge Notice, and (5) an increase in the at-fault thresholds. All of these recommendations were adopted for the benefit of consumers and insurers.

Results

The Board of Appeal, in conjunction and in cooperation with the Task Force, implemented an administrative review of certain winter weather-related accidents. This process eliminated the need for insureds and insurers to attend a formal hearing. Only appeals that could be decided in favor of the appellant were resolved in this fashion.

For the convenience of appellants, the Board of Appeal implemented a procedure whereby an appellant, who cannot or chooses not to attend a scheduled hearing, may submit a written affidavit detailing the basis of the appeal, in lieu of a personal appearance. Not only does this provide a convenient option for consumers, but also curtails requests for postponements.

The implementation of administrative reviews coupled with the acceptance of written affidavits has aided in the reduction of the backlog of surcharge appeals. Despite two of the most severe winters on record, the Board of Appeal has been able to reduce its backlog from 22 months to less than 6 months.

The basis for determining fault in excess of 50 percent in motor vehicle accidents relative to the application of surcharges is the Standards of Fault. The Board of Appeal repromulgated these standards in order to improve the descriptions of various accident situations, making these standards easier to apply and understand.

With the support of the Task Force, the Division of Insurance redesigned the Surcharge Notice. The redesigned notice includes the complete statement of the Standard of Fault and provides a clear and detailed explanation for the filing of an appeal. In addition, the new notice advises the insured of the consequences of the surcharge. These changes are intended to improve the consumers' understanding of their rights under the Commonwealth's Safe Driver Insurance Plan, thereby enhancing due process.

Additionally, the reverse side of the Surcharge Notice provides a revised Surcharge Appeal Form that is structured to allow more detail and to aid insureds in their explanation of the accident. This revised Surcharge Appeal Form was designed with the intention of facilitating a future "on the record review," as well as the administrative review of winter weather-related accidents. An "on the record review" will allow for decisions to be rendered in favor of the appellant on the basis of documents submitted to the Board of Appeal by the appellants and insurers. This process will eliminate the need for either the insured or the insurer to attend a formal hearing, resulting in a cost savings, as well as an added convenience for appellants and their insurance companies.

Finally, the at-fault threshold (the minimum payment that triggers a major or minor at-fault accident surcharge) was examined by the Task Force to account for the rising cost of repairs to automobiles. The Task Force recommended that the minor at-fault accident threshold be increased from $200.01 to $500.01 and the major at-fault accident threshold be increased from $1,500.01 to $2,000.01. The recommendation of the Task Force to increase the thresholds was adopted in the 1995 SDIP.

TECHNOLOGICAL ACCOMPLISHMENTS

The Commonwealth's Board of Appeal and Merit Rating Board have combined efforts to utilize available technology to increase efficiency and improve the overall operations of the appeals process. A database has recently been developed to allow for electronic transfer of appeals data, thus increasing the efficiency of processing appeals. Surcharge Notices are sent to the Division of Insurance's lockbox.[6] A magnetic tape of relevant data is created by the bank and forwarded to the Merit Rating Board. The MRB matches the data, extracts pertinent information from appellants' surcharge notices, creates a file, and downloads this information. The Board of Appeal accepts this data and populates the database at the Division of Insurance.

The Division of Insurance programmed its database to generate acknowledgment receipts, hearing notices, findings, and statistical reports. This database also creates a file of decisions rendered by the Board of Appeal. The file is sent to the MRB where the individual's driving history record will be updated.

One of the purposes of redesigning the Surcharge Notice was to allow for an "on the record review" of appeals. The Board of Appeal, through its database, will generate reports which will be electronically transmitted to insurers. These reports will provide each insurance company with a list of pending appeals of their insureds. Insurance companies will in turn electronically transmit pertinent accident information to the Board. Using the information on the redesigned Surcharge Notice and the accident information provided by the insurer, an "on the record review" will be conducted for those appeals that can be decided in favor of the appellant.

Electronic mail will provide an additional option for the appellant to submit an appeal in writing in lieu of a personal appearance. The "on the record review" and acceptance of written appeals will eliminate the need for travel to a hearing location, offering a savings of time, money, and effort.

The Division of Insurance's satellite offices in Central and Western Massachusetts have been linked electronically to the Division's database, allowing decisions to be entered as they are rendered and an appellant's driving history to be updated.

The MRB intends to provide the capabilities for data transfer of SDIP Policy Inquiries and SDIP Claims over the telecommunication network as an alternative to the existing magnetic tape data transfers and to provide on-line update capabilities for SDIP Claim correction and SDIP Inquiries.

As part of a survey sent by the SDIP Task Force to insurers in February 1996, MRB solicited the industry's input on technological enhancements, improvements, and suggestions. The industry responded favorably to MRB's offer to provide alternatives for

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[6] Lockbox is an automatic system by which a bank deposits filing fees.

data transfers. Additionally, the MRB will use the host site at ITD (Information Technology Division) to create a World Wide Web page. Policyholders, operators, agents, and companies will soon have access to SDIP information through the Internet.

RECOMMENDATIONS

In order for the Commonwealth to maintain its leadership in accurately establishing risk classifications, encouraging safe driving, and providing an equitable system for all drivers, the Safe Driver Insurance Plan should be periodically reviewed, enhanced and fine-tuned.

The Division of Insurance and Merit Rating Board respectfully submit the following recommendations for consideration by the Commissioner. The parties to the automobile insurance rate hearings are also requested to consider these recommendations, and to recommend for adoption the proposals they support for implementation for 1997. We also recommend that those proposals the Commissioner deems appropriate be referred to the SDIP Regulation Hearing for consideration. The proposals that the Commissioner wishes to defer should be referred to the Joint Implementing Committee[7] for necessary research and development.

1. Elimination of the Surcharge Notice for Comprehensive Claims

Currently, no surcharges are assessed for comprehensive claims. However, an insurance company is required to send a notice indicating a possible future surcharge to insureds who have been paid for comprehensive claims. These notices are costly, time-consuming, and confusing to the insureds.

The Claims Advisory Committee of the Commonwealth Automobile Reinsurers unanimously recommended, as do we, that the notice requirement be eliminated from the regulation. The MRB believes that this change could be implemented for policy year 1997 without effecting existing systems and procedures. The requirement that the companies report these claims to the MRB should be retained for future statistical analysis and to comply with the requirements of state law.

2. Elimination of the Clean Slate Rule

If drivers are at Step 15 or higher and no incidents are attributed to their driving record for three consecutive years, the clean slate rule places them at Step 14 (a credit step). Good drivers, those at Steps 9 to 14, are not afforded comparable premium reductions when they maintain 3 years of incident-free driving.

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[7] See Recommendation 16, Joint Implementing Committee

In responding to the Division of Insurance's request for comments, The Automobile Insurers Bureau of Massachusetts (AIB) summarized the history of the clean slate rule stating that, "It was originally designed to ease the transition from the previous SDIP to the 1990 SDIP, and was initially placed in the 1990 SDIP with the idea that it would be removed in a few years." The Professional Independent Insurance Agents of Massachusetts (PIIAM) stated that, the "clean slate rule is a real "give-away" for the worst of drivers." This sums up the consensus of the Task Force. Therefore we propose that the clean slate rule be eliminated.

3. Excellent Driver Award — Step Ten Relief

Currently, no surcharge points are assessed for a driver's first minor civil traffic law conviction within the six year experience period. However, since this is not an incident-free year, a driver will not accrue a credit point. As a result, these drivers remain at Step 10 for the entire experience period and will not be returned to Step 9 until the completion of their sixth year of incident-free driving.

With this group of drivers in mind, we recommend the following "Excellent Driver Award" be adopted by the Commissioner of Insurance in accordance with M.G.L. c. 175 § 113B. Drivers who demonstrate their safe driving by attaining credit Step 9 and remaining there for three consecutive incident-free years will receive the "Excellent Driver Award." Once obtaining this award, no credit point will be subtracted and no surcharge points will be assigned to a person's driving record, for the first minor civil traffic conviction. Therefore, the "Excellent Driver Award" will preserve a person's Step 9 status.

4. Increased Collision Step Differential

Currently, the SDIP provides for a seven percent step differential for liability coverages and five percent for collision coverage. The AIB's actuarial analysis of the statistical data indicates that "the collision step differential should be increased from 5% to 6%." Drivers would receive an additional one percent decrease per credit step earned under their collision coverage, so that a driver at Step 9 who presently earns a 30 percent discount would be entitled to earn a 36 percent discount. For those drivers receiving a surchargeable incident a one percent increase per step would be generated. Therefore, we recommend this proposal be considered only to the extent that it have no effect on the revenue neutrality of the Plan.

5. Starting Step for New Massachusetts Drivers

Under the current system:
(1) Out-of-state drivers who obtain a Massachusetts driver's license must answer a question regarding their driving history on their automobile insurance application. If they indicate that their driving history includes a moving violation they must verify their driving history record to be placed at the appropriate credit step status, or they will be placed at Step 15. If they indicate they have no violations, they will be placed at Step 9, and no further verification is required.
(2) Drivers from other countries must also answer the same question regarding their driving history on their automobile insurance application. If they indicate that their driving history includes a violation, they are placed at Step 15; no further verification will be allowed to obtain the appropriate credit step. If they indicate they have no violations, they are placed at Step 9.
(3) Newly licensed Massachusetts drivers are automatically placed at a Step 15.

Therefore, we believe it would be most equitable for *all* new Massachusetts drivers be placed at the neutral Step 15. If a driver can verify their driving history record from a previous jurisdiction, they will be permitted to count incident-free driving years to arrive at their starting SDIP step. This will ensure that out-of-state drivers, drivers from other countries, newly licensed Massachusetts drivers, and drivers returning to Massachusetts will be classified in the most uniform manner possible.

We recommend that the Commissioner of Insurance refer this proposal to the Joint Implementing Committee for a feasibility study to determine if this proposal can be fairly implemented for the benefit of all consumers.

While affording new Massachusetts drivers the opportunity to place themselves at the appropriate credit step, the Commonwealth should utilize current technology to locate traffic law violations in other jurisdictions to provide the most accurate risk assessment possible.

Note: A special thanks to Iris Gómez, staff attorney for the Massachusetts Law Reform Institute, for taking her time to review and discuss with us some of the issues regarding this recommendation.

6. Out-of-State Traffic Law Violations

M.G.L. c. 175 § 113B states that the SDIP may, "also take into consideration convictions reported to the Registry of Motor Vehicles as the result of any compact entered into by the Secretary of Public Safety for the exchange of information between states."
Therefore, we request that the Commissioner of Insurance also ask the Joint Implementing Committee to study the feasibility of an exchange of driving records between the various jurisdictions, possibly utilizing information from the National Driver Registry (NDR).

7. Severity of Accident/Reclassification

Under the current Plan, surcharges are issued on the basis of collision or property damage payments, but not on the basis of bodily injury payments. We share in the concern expressed by Paul G. Hamel, Esq. of the Massachusetts Academy of Trial Attorneys, at the 1996 SDIP Regulation Hearing, that personal injury is not provided for in the Plan. As accidents increase in severity, so does the likelihood of bodily injury. In an effort to take into consideration an issue with great public safety and financial concerns, *i.e.*, bodily injury, we recommend a more accurate classification of accidents based on severity.

We recommend that the Plan's accident threshold categories be modified to include a third category. Under this proposal, "minor accidents" (accidents which resulted in payment of $500.01 to $2,000.00) would be assessed three points; "moderate accidents" (accidents which resulted in payments of $2,000.01 to $5,000.00) would be assessed four points; and "major accidents" (accidents which resulted in payments in excess of $5,000.00) would be assessed five points. This will provide greater incentives for safe driving, adding to the ongoing efforts to increase public safety.

8. Review of Traffic Law Violations Point Assessments

The points assigned to certain motor vehicle or motor vehicle related offenses should be reassessed. Four categories of violations are recommended: (1) "minor" violations, to be assessed two points; (2) "moderate" violations, to be assessed three points; (3) "major" violations, to be assessed five points; and (4) "major repeat" violations, to be assessed six points. Repeat convictions for more serious motor vehicle offenses, such as operating under the influence of liquor or drugs, vehicular homicide, operating after revocation of a license, driving to endanger, and certain other offenses which may result in a license suspension or revocation should be included in this new "major repeat" category. The violations designated for reclassification were selected due to their high frequency and/or the potential high risk to public safety. All other incidents will be examined for reclassification based on loss propensity.

9. No Benefit While Incarcerated

We recommend that individuals who are incarcerated for one year or more (regardless of whether or not the individual retains a driver's license) shall not be credited with incident-free years of driving for the purpose of evaluating their step status. The time period during which a person is incarcerated is obviously not an accurate barometer of risk propensity. A feasibility study would be required by the Joint Implementing Committee to determine how to implement this proposal.

10. The Safe Driver Bonus Step

Under the current Plan, good drivers (those who maintain an incident-free driving history record for six years) are rewarded by being placed at the lowest and best credit step, Step 9. As a result of their efforts, these drivers are entitled to discounts of 42 percent on their liability coverages and 30 percent on their collision coverage,[8] and depending upon their insurer, may also be entitled to additional discounts (due to the deviation filings).

Although currently the Plan provides strong incentives to drive safely and achieve the lowest credit step, further incentives are needed to encourage and reward safe driving once credit Step 9 is achieved. This is the concept behind the "Excellent Driver Award"[9] and the following recommendation, the "Safe Driver Bonus Step." We recommend that a lower step be created which carries no deeper discount today, but which may in the future. After three additional years of incident-free driving, this lower starting step will protect an excellent driver from the full effect of a surcharge. The Professional Independent Insurance Agents of Massachusetts stated, "PIIAM is in favor of an extra "safety step". . . ." The State Rating Bureau (SRB) stated that this should not effect current deviations, and in fact, could further identify the safest drivers in the state making them the potential recipients of further rate deviations. Naturally, due to the potential effect on the Plan's revenue neutrality, a more thorough study needs to be conducted before this proposal could be implemented.

11. Aging

While the "Excellent Driver Award" and the "Safe Driver Bonus Step" will provide the best drivers (Step 9) with continued incentives to drive well, the concept of "Aging" points will provide incentives for good driving at all other steps on the SDIP ladder. Due to the potential effect on the Plan's overall rates, we recommend that two proposals be further studied.

First, under an incident aging proposal, the points assessed to each surchargeable incident would decrease each incident-free year. For example, after one incident-free year, an insured at Step 14 with two surchargeable incidents would move down at least to a Step 12.[10] Secondly, under an annual aging proposal, an insured's surcharge step would be reduced each incident-free year by at least one point. For example, after one incident-free year, the same insured in the first example would move from Step 14 to at least Step 13.[11] The Automobile Insurers Bureau of Massachusetts commented, "aging surcharge points over time to make them decrease in effect is a rational change. . ." The Task Force

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[8] If Recommendation 4 is adopted, this *30 percent reduction* under an insured's collision coverage would be increased to a *36 percent reduction*.

[9] See Recommendation 3, Excellent Driver Award—Step Ten Relief.

[10] Note if either or both of these surchargeable incidents are six years or older, an insured could realize a more substantial downward movement.

[11] See footnote 10.

requested that Robert MacNicholl, Deputy Director of the State Rating Bureau conduct a preliminary analysis of "Aging." The study entitled *Test of Changes to Current SDIP Point Assignments* is attached to this report.

12. Renaming the SDIP Steps

In 1990, in order to make the Plan more readily understandable, a ladder or step system was created. Currently, this step system ranges from Step 9 to Step 35 with Steps 9 to 14 being credit steps, Step 15 being the neutral step, and Steps 16 to 35 being surcharge steps. The original rationale for this system was to allow for growth in both credit steps and surcharge steps while affording individuals positive numbers to calculate their SDIP step. As the system continues to remain in place, some drivers have become more aware of the overall scheme due primarily to the deviation filings which have highlighted the importance of one's step classification, and the efforts made by the Division of Insurance to educate the public through its annual brochure entitled "Ways to Save on Your Automobile Insurance."

Therefore, we recommend that the current nomenclature remain in place until such time that the broader recommendations have been adopted by the Commissioner of Insurance. At that time, we will revisit renaming the steps to make them more intuitive and will consider among other proposals, a zero-based system. In this system, zero would be the starting or neutral step and positive and negative numbers would represent surcharge and credit steps.

13. Return of Deductible

After successfully appealing a surcharge before the Board of Appeal (receiving a Vacate Finding), appellants sometimes assume that their collision deductible will be reimbursed by their insurance company. Different insurance companies that underwrite automobile insurance in the Commonwealth have applied different standards for determining when to refund the insured's collision deductible.

A Vacate Finding, that an appellant is not more than 50 percent at-fault, does not imply that another driver is more than 50 percent at-fault. This decision could be based on intervening circumstances or could be the result of both parties being 50 percent at-fault. In order to encourage a fair and uniform policy for returning an appellant's deductible, we propose that the Commissioner issue an explanatory bulletin and the Plan reflect that the Board of Appeal's Vacate Finding is not a determination that an appellant "is entitled to recover in court against an identified person," [12] and thus, is not determinative regarding the refund of the appellant's deductible. For a further discussion of this issue, see

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[12] See *Massachusetts Automobile Insurance Policy, Waiver of Deductible Endorsement.*

Encouraging Consistency for Consumers submitted by Joseph Mulkern, Assistant General Counsel to the Division of Insurance and attached to this report.

14. Settlement of Auto Claims Outside the SDIP/Buy Back of Claims

Unfortunately, there are individuals who have attempted to avoid surcharges by partially buying back their automobile insurance claims. Through escaping the appropriate risk assessment, these individuals contribute less than their fair share to the pool, thereby placing a disproportionate burden on the rest of the driving population. Such a scheme may involve a driver who received a $550 payment from his insurance company. This driver might refund $51 to the company in order to avoid the $500 surcharge threshold. We are concerned about maintaining the integrity of the safe driver insurance pool for the benefit of all drivers. Therefore, we recommend that language be adopted in the SDIP to prevent this practice and additional interpretive bulletins be issued as necessary. For a further discussion of this issue, see *Encouraging Consistency for Consumers*.

15. Creation of a SDIP Brochure

One of our objectives is to increase public awareness and education. We believe the recommendations included in this report can best be effectuated through a combination of the existing automobile insurance consumer's guide and the development of a SDIP brochure by the Joint Implementing Committee. A SDIP brochure should be published whenever changes are made to the Plan; otherwise it should be reprinted on an annual basis and disseminated with an individual's policy. The consumer guide and SDIP brochure will provide consumers with information about; annual changes to the Plan, calculating their SDIP step, accessing information regarding their SDIP step using the Internet, and the appeal mechanism before the Board of Appeal.

16. Joint Implementing Committee (JIC)

In keeping with the overall goals and objectives of the Task Force, and to ensure that those recommendations accepted by the Commissioner of Insurance are supported by the necessary resources to ensure their implementation, we recommend that the Commissioner establish a Joint Implementing Committee. This committee should be made up of the Director of the Merit Rating Board, a representative from the Division of Insurance and a representative from the Office of the Attorney General. These three agencies are responsible for the functioning and implementation of the SDIP. We further recommend that the Commissioner appoint the Director of the Merit Rating Board as Chairperson of this committee.

CONCLUSION

The recommendations contained in this report are the culmination of the efforts of the Task Force combined with input solicited from outside sources. Through these efforts we have discovered that the Safe Driver Insurance Plan compares favorably with risk assessment plans used in other jurisdictions. Despite the high probability of accidents in Massachusetts due to high automobile density and severe weather conditions, Massachusetts has succeeded in lowering automobile rates over the past few years. The Commonwealth has accomplished this while offering a Plan that provides substantial rewards for safe driving as well as a unique due process system. This Plan allows for greater fairness and respect for individual drivers than any other system we have studied.

The Division of Insurance and Merit Rating Board offer the recommendations in this report in keeping with the goals and objectives of the Task Force. These recommendations are offered only to the extent that they have no negative impact on the automobile insurance rates. We recognize that some of our proposals may require additional study. We recommend that such studies begin as soon as possible, so that any recommendations for change that the studies produce can be considered for implementation at the earliest possible date.

It is our sincere hope that the recommendations in this report, if adopted by the Commissioner, will create a Plan that is stronger, more equitable, easier to understand and apply, and which will provide increased incentives for safe driving.

[END]

APPENDIX

DRAFT

I. ISSUES FOR CONSIDERATION

1. What credits/surcharges should be applied to foreign license holders who are new Massachusetts license holders?

2. Should previous license holders from other states with histories of accidents and violations be placed at the neutral step?

3. "The Safety Step" Can an additional credit step be created that does not carry a discount, but that allows a driver who has an accident or violation to start from a lower step when the surcharge is applied?

4. Could the notice currently sent by insurance companies after a comprehensive claim be eliminated?

5. Should attempts to circumvent the intent of the SDIP by insureds who "buy back" part or all of their claim payment be discouraged and prevented?

6. Is it the case that insurance companies need not refund the deductible of insureds who have been found to be less than 50% at fault by the Board of Appeal?

7. Should out of state traffic violations incurred by MA drivers impact their SDIP step?

8. Should the three year clean slate rule be eliminated, or how can it be improved to be more equitable and provide incentives to better drivers to see a sudden impact on their SDIP status?

9. Should one or more higher steps be created beyond the current maximum step of 35?

10. Should the coverage selections page be used for informational comments that would educate / inform (congratulate) drivers?

11. *Should households with drivers at various SDIP steps receive a weighted rating instead* of placing the household at highest operator's step?

12. Should the points currently attributed to traffic violations be reassessed and reassigned?

13. Should traffic violation citations bear a statement about potential insurance impact, and the fact that that impact cannot be separately appealed to the BOA?

14. How can the numbers / names assigned to each SDIP step and the starting step be simplified to make them intuitive?

15. How does the experience period for the driver education credit compare to the overall experience period? Should they correspond more?

16. Could surcharge points decrease quicker? Could further accident categories be created?

17. Could new procedures be established for auditing company compliance with the SDIP?

18. Could credits begin to reduce an individual's SDIP step in the years immediately after the year in which an incident occurs?

19. Should the filing fee be returned to people who have their surcharge vacated after a successful surcharge appeal?

20. Should incidents which occur while operating a commercially registered vehicle be considered when calculating an individuals SDIP step?

21. Should individuals who have been incarcerated accrue SDIP credit points during their time spent in prison?

II. TEST OF CHANGES TO CURRENT SDIP POINT ASSIGNMENTS

MEMORANDUM

TO: Ralph Iannaco, Deputy Commissioner & Chief of Staff
Stephen D'Amato, Director, SRB
FROM: Robert MacNicholl, Deputy Director, SRB
DATE: June 12, 1996
RE: SDIP Task Force--Test of Changes to Current SDIP Point Assignments

Introduction

The SDIP Task Force has undertaken the review of the existing Massachusetts Safe Driver Insurance Plan (SDIP) with the goal of making the SDIP more efficient and user friendly. The Division of Insurance has taken the lead in establishing the SDIP Task Force and incorporating participation from all segments of the automobile insurance market in Massachusetts. Those participating include the Division of Insurance, Attorney General (AG), Merit Rating Board (MRB), Automobile Insurers Bureau (AIB), Commonwealth Automobile Reinsurers (CAR), representatives of consumer organizations, and individual insurers.

A number of ideas have been generated by the above members of the Task Force relative to changes in the way that clean years and surcharge points are considered in the SDIP. The SRB has accepted the task of reviewing the feasibility of potential changes for the Task Force.

Plan Options

The SRB has undertaken a preliminary analysis of the effects of certain changes in the Massachusetts Safe Driver Insurance Plan (SDIP). While many ideas were generated by the Task Force, there were several ideas in the area of clean years and surcharge point assignments that appeared to have general appeal for quantitative analysis. These ideas include aging surcharge incidents and elimination of the effects of one minor traffic incident in less than a six year period. The SRB has included the following options in its analysis:

1. Current Plan (1996)

2. 1 MT (Minor Traffic) Clean Slate-- The three year clean slate rule is eliminated from the current plan and a single incident minor traffic clean slate is introduced. This eliminates the SDIP effects of one minor traffic incident in the six year experience period after three incident free years, i.e., an operator would be at step 9 with one minor traffic violation in the experience period followed by three clean years.

3. Age All--The three year clean slate rule is eliminated from the current plan and an incident aging rule is introduced. The incident aging rule reduces the points assigned for each incident according to the rule of a one point reduction for each incident free year following the incident. The minimum points for an incident would be zero points with no credit given for the year the incident is assigned.

The Commonwealth of Massachusetts
Motor Vehicle Insurance - Merit Rating Board
1135 Tremont Street - 6th Floor, Boston, Massachusetts 02120-2103
(617)267-3636 Fax (617)351-9660

Y ANN MULHALL
DIRECTOR

To: Bob MacNicholl
From: David Albertz@Merit Rating Board
Subject: SDIP Task Force Data Request
Date: May 24, 1996

Bob,

Attached is a diskette with a Microsoft Excel file, Sdipsamp.xls, which contains the data you requested. I have also included a printout that lists the violation chapter/section and description for each type of incident number. Note that there are two entries for at-fault accidents - major accident and minor accident. The third column of the spreadsheet contains information as follows:

At-fault accident:	Dollar amount of claim.
Speeding violation:	Difference between actual speed and speed limit.
Other violations:	Dollar amount of fine.

As we discussed over the phone, fine amounts and speed differences were not recorded for incidents prior to 1/1/92, or for any criminal violations. Whenever this information is missing, the third column will contain a zero amount.

If you have any questions, please call myself at 351-9611 or Donna Brennan at 351-9618.

Sincerely,

David Albertz

cc: Mary Ann Mulhall

Appendix A

	Violation Chap/Sect		Description
1.	85 2		DPW STATE HWAY REGS
2.	MRB SDIP		MINOR TRAFFIC
3.	89 1		FAIL TO KEEP RIGHT
4.	89 2		IMPROPER PASSING
5.	89 4		KEEP RIGHT NO VIEW
6.	89 4A		LANE VIOLATION
7.	89 4B		KEEP IN RIGHT LANE
8.	89 4C		LEFT LANE EXCLUSION
9.	89 7A		IMPEDE EMERG VEHICLE
10.	89 8		RT OF WAY INTERSECTN
11.	89 9		FAILURE TO STOP
12.	89 10		ONE WAY STREET
13.	89 11		YIELD TO PEDESTRIAN
14.	90 7		IMPROPER EQUIPMENT
15.	90 7A		NO INSPECTION STCKER
16.	90 7AA		NO CHILD RESTRAINT
17.	90 8		LICENSE RESTRICTION
18.	90 9		UNREG/IMPROPER EQUIP
19.	90 10		OPERATOR UNLICENSED
20.	90 12		ALLOW UNLIC OPERATE
21.	90 13		IMPEDING OPERATION
22.	90 14		FAIL TO USE SAFETY
23.	90 14A		YIELD BLIND PERSON
24.	90 14B		FAIL TO GIVE SIGNAL
25.	90 15		STOP AT RR CROSSING
26.	90 16		ILLEGAL OPERATION
27.	90 17		SPEEDING
28.	90 18		SPEEDING
29.	90 23	RE	LICENSE REVOKED
30.	90 24	PI	LEAVE SCENE PERS INJ
31.	90 24	DE	DRIVING TO ENDANGER
32.	90 24	DI	DWI LIQUOR
33.	90 24	DD	DWI DRUGS
34.	90 23	SU	LICENSE SUSPENDED
35.	90 24D		DWI ALCOHOL PROGRAM
36.	90 25		REFUSE OBEY POLICE
37.	90 34J		NO LIABILITY POLICY
38.	97		MINOR ACCIDENT
39.	98		MAJOR ACCIDENT
40.	90 31		REGISTRAR RULE/REG
41.	90 20	IS	NO INSPECTION STCKER
42.	90 18	FS	FAILURE TO STOP
43.	730 300	FS	SUM/CAL TUNL OTHER
44.	730 500	SP	MASS PIKE SPEED
45.	730 300	IF	SUM/CAL TNL INSP STK
46.	730 300	SP	SUM/CAL TUNL SPEED
47.	720 900	OT	ST HWAY VIOLATION
48.	730 500	V1	MASS PIKE VIOLATION
49.	ORD TOWN		MINOR TRAFFIC
50.	740 2100	OT	MINOR TRAFFIC

Memorandum

DATE: September 3, 1996

TO: Buddy Iannaco, Deputy Commissioner and Chief of Staff

FROM: Daniel L. Arndt, Esq.

RE: Study of Other Jurisdictions' Automobile Insurance Systems

Introduction:

The attached table reflects the results of a research study of other jurisdictions' automobile insurance systems for the purpose of comparison and analysis with the current automobile insurance system in Massachusetts. This study was part of the ongoing process of evaluating the current Safe Driver Insurance Plan by the SDIP Task Force. It should be noted at the outset that this study was not designed to be an exhaustive review of each jurisdiction's automobile insurance system. Instead, efforts were taken to compare Massachusetts' automobile insurance system to other jurisdictions that are similarly situated to Massachusetts. As a result of this approach, 23 jurisdictions similar to Massachusetts were studied out of a possible 51 jurisdictions (including the District of Columbia).

Methodology:

A basis of comparison was established in order to select the 23 similarly situated jurisdictions. Essentially, two parameters were simultaneously analyzed. First, the number of automobiles per road mile was obtained by collecting data on the number of registered vehicles in each jurisdiction and dividing this number by the sum of the rural and urban road miles in each jurisdiction. An assumption was made that as automobile density increased in each jurisdiction, the accident rate would likewise increase. Second, the weather was considered by taking selected cities in each jurisdiction and reviewing annual precipitation and snowfall. A "Snow" designation is ≥ 35 inches of snow annually in a major city in that jurisdiction; a "Rain" designation is ≥ 20 inches of rain annually in a major city in that jurisdiction; a "Dry" designation is < 20 inches of rain annually in a major city in that jurisdiction. Again, an assumption was made that as the weather became more severe in each jurisdiction, the accident rate would increase.

After the data was entered into the spreadsheet, the data was sorted to show the jurisdictions that had the highest density of automobiles per road mile with similar weather conditions. As the table clearly indicates, Connecticut, Rhode Island, and New

York are the most similar to Massachusetts in terms of the number of automobiles per road mile and weather. At this point, we completed the table for every jurisdiction that had a "Snow" designation. In addition, we included the District of Columbia, Hawaii, New Jersey, and California. Although these jurisdictions did not have similar weather patterns to Massachusetts, they had similar high density automobile conditions.

To complete the rest of the table, a number of different sources were consulted. First, we reviewed the pertinent regulations in some of the other comparison jurisdictions along with the sources listed in the footnotes on page 6 of the table. Second, we contacted an individual at either the Division or Department of Insurance in each comparison jurisdiction and/or spoke with an underwriter for a major insurer within the comparison jurisdiction. We decided to contact specific individuals within each jurisdiction to gain an appreciation for how each jurisdiction's automobile insurance system operated in practice (not just on paper).

Preliminary Results:

Although the review of the data in this study is ongoing, several preliminary results can be drawn. As measured by automobile density and weather, of the 51 jurisdictions included in the study, Massachusetts is second only to Connecticut in terms of the probability of a being involved in an automobile accident. Naturally, this higher accident rate would lead to a greater number of accident claims creating an upward pressure on automobile insurance premiums. Yet, automobile insurance premiums have deceased in Massachusetts over the past two years.

This decrease in automobile insurance premiums has occurred while Massachusetts has provided the utmost in due process for the drivers of Massachusetts. Massachusetts allows for parties aggrieved by a decision of their insurer, that they were more than 50% at fault in an automobile accident, to have a full hearing on the merits of case, before an impartial hearing officer at the Division of Insurance. Connecticut, the state that is the most similar to Massachusetts in automobile density and weather, provides no hearings (only written complaints used infrequently if a surcharge is mistakenly issued). Rhode Island allows for appeals, but these hearings are not a full hearing on the merits of the case. In fact, most of the 23 comparison jurisdictions provide for no hearings or very limited hearing rights. This is a particularly disturbing trend because in many jurisdictions, insurers can increase automobile premiums *for the insured's first accident* as much as 50% for certain coverages. This statement is true for Ohio, Utah, Minnesota, Wyoming, and South Dakota none of which provide for hearings.

Many insurers in other jurisdictions did indicate that they provide internal reviews for insureds who are aggrieved by their decision regarding liability in an automobile insurance case. However, Massachusetts provides for the utmost in due process by insuring that an unbiased party from the state reviews all cases that are appealed. Relying on insurers to make decisions which would be adverse to the collection of premiums (in

most cases, after making payment on a claim) is an unrealistic burden to place on insurers.

In addition to variations with respect to the availability of hearings, jurisdictions vary widely in the dollar thresholds necessary to trigger a premium increase. What coverages are included in meeting the threshold provides for additional confusion. For example, insurer X might have a threshold of $1,000.00, but indicate that the sum of both collision *and* property damage is considered in meeting the threshold. On the other hand, insurer Y might have a threshold of $500.00 but only consider collision *or* property damage. Jurisdictions, like Massachusetts, are fairer in that the threshold amount is set by statute and clearly defined.

Moreover, rating systems vary greatly from jurisdiction to jurisdiction. Information contained in the table reflects insurers' standard line automobile insurance policies as opposed to high risk plans. Although it is difficult to draw significant conclusions from the study without further analysis, one preliminary conclusion can be reached. Out of 23 comparison jurisdictions, at least of 12 jurisdictions offers some incremental reduction in automobile insurance premiums for each year an insured remains incident free following an accident (i.e., an "aging system"). From speaking with underwriters in other jurisdictions, this approach seems to be an effective way to encourage safe driving in their jurisdictions. Therefore, an "aging system" should be studied in Massachusetts as well.

With respect to the duration of surcharge or "experience period," the time period during which accidents and citations remain on a person's driving record, some variations exist between the comparison jurisdictions. According to the data collected, the most common experience period seems to be 3 years. Massachusetts' experience period is 6 years which allows for more accurate and hence fairer assessment of loss propensity. This is another reason to study an "aging system" that would balance the current experience period with downward movement for insureds.

Conclusion:

Despite the high probability of accidents in Massachusetts due to weather and automobile density, Massachusetts has consistently lowered automobile insurance rates over the past few years. The state has done this while providing for the utmost in due process, allowing for impartial hearings on demand for the citizens of the state. Unlike some other jurisdictions, the statutory scheme provides for clearly defined thresholds. Finally, as Massachusetts continues to move forward, it should consider an "aging system" as a method to further encourage safe driving providing a balance to the plan.

Rank	State	Comp Liab Ins.[1]	Appeals Process[3] Hearings	Notification	Threshold[3]	Rating System[3]	Duration of Surcharge[3]	Comparison Index # of Autos /Road Miles[5]	Comparison Index Weather[6*]
1	Connecticut	Yes	No Hearings; Written Complaint Possible (Used infrequently for mistakes in issuance of surcharge)	N/A	>$1000.00 in PD or Collision for 2nd accident, no surcharge 1st accident unless BI.	Each Co. files own plan; No typ. plan/prem.; Allstate (#1 at 11-13%), 1st acc. no BI=0% inc.; 2nd acc.=44% inc. BI/PD, 26% inc. coll., 3rd acc.=119% inc. BI/PD, 64% inc. coll. maximums; aging approx. 9%/incident free yr.	3-5 years	127.77	Snow
2	Massachusetts	Yes	Hearings; All appeals given a full hearing on the merits	Notice gives full descript. of appeal rts	>$500.00 in PD or Collision = 3 pts; >$2000.00 in PD or Collision = 4 pts.	State sets all rates; Insured must be found >50% at fault	6 years	127.21	Snow
3	Rhode Island	Yes	Appeals; Limited to specific exception in reg. e.g. 51% received by other driver, auto legally parked,etc.	No Notice; left to insured to inquire	>$500.00 in PD or >$0.00 BI typical For Allstate: Sum of BI, PD & Coll. >$500.00 and >50% at-fault	Each Co. files own plan; Allstate (#1 at 11.1%), 1st acc.=$45 inc BI, $23 inc PD, $24 inc Coll, Aging in 2nd yr =approx. 20-33%, 3rd yr=approx. 25%, 2nd acc.=$122 inc BI, $61 inc PD, $59 inc Coll, 10% disc. if incident free 5 yrs., no charge minor traffic	3 years max.	117.06	Snow
4	New York	Yes	Hearings; Never used; Approx. 2000 complaints/yr. handled informally by DOI consumer services	No Notice	>$1000.00 combined PD and Collision	Each Co. files own plan; Typical plan 20-50% increase for one at-fault accident; ISO plan is a 40% increase for 1st at-fault acc	3 years	91.46	Snow
5	Ohio	Yes	No Hearings; Complaint to consumer services possible	N/A	Varies, For Allstate: Sum of BI, PD, & Coll >$300.00 & >50% at-fault, By Stat. can't surc 1st not at-fault acc but can surc 2nd not at-fault accidents	Ea. Co files own plan; Allstate (#2 at 7%), 1st acc=50% inc BI & PD, 18% inc Coll, Aging in 2nd yr -10% BI & PD, -7% Coll, 3rd yr -10% BI & PD, -2% Coll, 2nd acc=135% & 43% inc resp., 10% disc. if incident free 5 yrs, no charge minor traffic violation	Varies, 3 years	82.71	Snow
6	Pennsylvania	Yes	No Hearings; Complaint to consumer services possible	N/A	>$750.00 combined PD and Collision	Each Co. files own plan; Typical plan one pt./at-fault accident; 30% premium increase per pt.	3 years	71.64	Snow

7	New Hampshire	No	No Hearing Provisions	N/A	>$500.00 for BI or >$1000.00 for PD or Collision to be considered an "accident"	Each Co. files own plan; 1pt for BI>$500 but <$5000, 1pt. for PD/Coll.>$1000 but <$10,000, 2pts. for death, BI ≥ $5000, or PD/Coll ≥ $10,000, 3pts. for 3 or more accidents in exp. period, state sets min. discs. 5% for each pt. free yr. up to 20%.	3 years or 2 years for speeding convictions		65.40	Snow
8	Michigan	Yes	Hearings; Never used, for premium increases only after attempted resolution with insurer as required by statute	Notice of Rt. to appeal in Renewal Notice/Bill	Varies; For Allstate: Sum of BI, PD, Coll, & PIP >$300.00 and >50% at-fault	Ea Co files plan; MRP req by law: a) subst at-fault acc b) convict civil infrac Allstate (#4 at 11%) 1st acc=45% inc BI PD & PIP 23% Coll; Aging 2nd yr -10% 8% resp 3rd yr -15% -4%; 2nd acc=140% 57% inc resp, 10% disc if free 5 yrs, 125% inc +25 sp limit	2-3 years		63.42	Snow
9	Illinois	Yes	No Hearings except for canc/non-renewals, Complaints handled through cons. servs.	Notice of Rt. to appeal given in canc/non-renewal notice; otherwise none	Varies; typically $300.00-$750.00 for Coll. or PD	Each Co. files own plan; At-fault accidents are 2 pts. but no typ. prem. inc., pure comparative; surcharge possible if even 1% at-fault and meet min. threshold	3 years typical		59.36	Snow
10	North Carolina	Yes	Hearings can be requested in writing from the NC rating bureau; insureds do req. appeals	No Notice; Agents may inform insured	$1.00-$1000.00 =1pt. for PD >$1000.00-$1999.00 =2pts. for PD >$1999.00 =3pts. for BI/PD	Each Co. files own plan; for pts typ. inc. over base prem. 1pt=25% inc., 2pts=45% inc., 3pts=65% inc., 4pts=90% inc., 5pts=120% inc., 6pts=150% inc., 7pts=180% inc., 8pts=220% inc., 9pts=260% inc., 10pts=300% inc., 11pts=350% inc, 12pts=400% inc.	3 years		56.09	Snow
11	Maine	Yes	No Hearings except for canc./non-renewal	Notice of Rt. to appeal given in canc/non-renewal notice; otherwise none	≥$500.00 for PD and any payment for BI	Each Co. files own plan; each at-fault is 1 pt= 10-25% prem. inc.; citations no pts unless no insurance is 2pts. and serious violation (OUI, etc.) is 3pts.	3 years		45.98	Snow
12	Colorado	Yes	Hearings for premium increases heard by protest officer if insurer fails to apply plan correctly. Tit. 10 Art. 4 Sect. 720.	Notice given 30 days prior to proposed effective date of the action	≥$500.00 for BI/PD/Collision & >50% at-fault	Ea. Co files own plan; Allstate (#3 at 7.6%), 1st acc=50% inc BI & PD, 26% inc Coll, Aging in 2nd yr -10% BI & PD, -9% Coll, 3rd yr -10% BI & PD, -4% Coll, 2nd acc=135% & 64% inc resp., 10% disc. if incident free 5 yrs, no charge minor traffic violation	3 years		38.82	Snow

13	Alaska	Yes	Hearings for premium increases; initial appeal thru insurer and further review thru director of insurance	Notice given 20 days before surcharge is applied	>$100.00 BI/PD State Farm (#1 at 33%) ≥$400.00 PD or Single Vehicle ≥$400.00 Coll	Ea. Co. files own plan; State Farm plan: 1st acc=10% inc, 2=30%, 3=80%, 4=50% on 3rd acc prem; Acc. aged 3yrs. off rec. 2-1acc=20% inc, 3-2=50%; 3 cons/yrs free 10%dis, 6=15%dis, 9=15%+1st acc forgive, pref co minor traf no effect, stand 1=30%, 2=50%	Varies State Farm 3yrs		35.82	Snow
14	Wisconsin	No	No Hearings; Written Complaints (approx. 3000) are reviewed by consumers services	N/A	Varies State Farm (#2 at 14.1%) ≥$400.00 PD or Single Vehicle ≥$400.00 Coll	Ea. Co. files own plan; State Farm plan: 1st acc=10% inc, 2=30%, 3=80%, 4=50% on 3rd acc prem; Acc. aged 3yrs. off rec. 2-1acc=20% inc, 3-2=50%; 3 cons/yrs free 10%dis, 6=15%dis, 9=15%+1st acc forgive, pref co minor traf no effect, stand 1=30%, 2=50%	Varies State Farm 3yrs		34.66	Snow
15	Vermont	Yes	No Hearings; Complaints phoned in to consumer services	N/A	>$900.00 BI or >$1000.00 PD or Collision or Death where insurer made payment	Each Co. files own plan; No typ. plan/prem.; Allstate (#1 at 16.7%) incl.excepts. for coll. w/ animal, operator recouped ≥ 50% from resp. party, etc.; 1st at-fault accident 50% inc. in Liab/PD prem. & 26% inc. in Coll. prem., no prem. inc. for minor traf.	3 years		34.38	Snow
16	Utah	Yes	No Hearings	N/A	Varies, For Allstate >$300.00 for sum of BI, PD, & Coll & >50% at-fault	Ea. Co files own plan; Allstate (#3 at 12.5%), 1st acc=50% inc BI & PD, 26% inc Coll, Aging in 2nd yr -10% BI & PD, -9% Coll, 3rd yr -10% BI & PD, -4% Coll, 2nd acc=135% & 64% inc resp., 10% disc. if incident free 5 yrs, no charge minor traf violation	3 years		33.55	Snow
17	Minnesota	Yes	No Hearings	N/A	>$300.00-$500.00 PD or Coll. State Farm (#1 at 27%) ≥$400.00 PD or Single Vehicle ≥$400.00 Coll	Typ. inc. 10%-50% 1st acc.; State Farm plan: 1st acc=10% inc, 2=30%, 3=80%, 4=50% on 3rd acc prem; Acc. aged 3yrs. off rec. 2-1acc=20% inc, 3-2=50%; 3 cons/yrs free 10%dis, 6=15%dis, 9=15%+1st acc forgive, pref co minor traf no effect, stand 1=30%, 2=50%	3-5 years		28.80	Snow

18	Wyoming	Yes	No Hearings	N/A	Varies, For Allstate >$300.00 for sum of BI, PD, & Coll & >50% at-fault	Ea. Co files own plan; Allstate (#4 at 7.5%), 1st acc=50% inc BI & PD, 26% inc Coll, Aging in 2nd yr -10% BI & PD, -9% Coll, 3rd yr -10% BI & PD, -4% Coll, 2nd acc=135% & 64% inc resp., 10% disc. if incident free 5 yrs, no charge minor traffic violation	3 years	15.20	Snow
19	Montana	Yes	No Hearings; Complaints handled informally thru consumer services by contacting insurer	N/A	>$300.00 PD or any BI claim. Operator must be found at fault	Each Co. files own plan; typical plan for 1 at-fault accident in a 1 car family = 20% inc., for 1 at-fault accident in a 2 car family = loss of all discounts	3 years	13.56	Snow
20	South Dakota	Yes	No Hearings	N/A	Varies, For Allstate >$300.00 for sum of BI, PD, & Coll & >50% at-fault	Ea. Co files own plan; Allstate (#8 at 2%), 1st acc=50% inc BI & PD, 26% inc Coll, Aging in 2nd yr -10% BI & PD, -9% Coll, 3rd yr -10% BI & PD, -4% Coll, 2nd acc=135% & 64% inc resp., 10% disc. if incident free 5 yrs, no charge minor traffic violation	3 years	9.83	Snow
21	District of Columbia	Yes	No Hearings; Co like State Farm may have internal written appeal process, may file written protest to Insurance Commissioner	None	Varies, For State Farm (#2 at 26.5%) ≥$400.00 for Coll in 1 car acc ≥$400.00 for PD or Liab for 2 car acc	Ea. Co. files own plan; State Farm plan: 1st acc=10% inc, 2=30%, 3=80%; No aging provisions, no prem discounts standard co, minor traf no effect, rating org behind in recordkeeping 6-8 mos, difficult to find traf viol b/c no recipro out of state	3 years	242.10	Rain
22	Hawaii	Yes	No Hearings	N/A	Varies, For State Farm (#1 at 24.5%) >$400.00 for Coll in 1 car acc >$400.00 for PD or Liab for 2 car acc	Ea. Co. files own plan; State Farm plan: 1st acc=10% inc, 2=30%, 3=80%; Acc. aged 3yrs. off rec. 2-1acc=50% inc, 3-2=70%; 3 cons/yrs free 10%dis, 6=15%dis, 9=15%+1st acc forgive, pref co minor traf no effect	3 years	184.36	Rain
23	New Jersey	Yes	No Hearings	N/A	≥$500.00 for sum of BI, PD, & Coll, Comp. free to set higher threshold & ≥50% at-fault State Farm (#1 at 14.4%)	Ea Co files own plan; State sets pts & Co sets rate; DUI=9pts, Acc=5, Speed 1-14mph over=2, 15-29=3, >29=5; State Farm flat $ inc for 2pts=$150 liab, $34 comp, $65 coll; 5pts=$360, 80, 155 resp, forgive 1st min speed by law, 6yrs w/o incident freebee acc	3 years	161.35	Rain
24	Maryland	Yes						119.50	Rain
25	Dela[illegible]	Yes						65	Rain

26	Florida	Yes							88.14	Rain
27	Virginia	Yes							80.83	Rain
28	Tennessee	No							59.56	Rain
29	Washington	Yes							57.22	Rain
30	Louisiana	Yes							53.79	Rain
31	Indiana	Yes							51.47	Rain
32	Georgia	Yes							50.35	Rain
33	Texas	Yes							44.72	Rain
34	South Carolina	Yes							42.54	Rain
35	West Virginia	Yes							38.67	Rain
36	Alabama	No							36.70	Rain
37	Kentucky	Yes							35.56	Rain
38	Missouri	Yes							33.85	Rain
39	Oregon	Yes							27.99	Rain
40	Mississippi	No							27.84	Rain
41	Oklahoma	Yes							24.98	Rain
42	Iowa	No							24.67	Rain
43	Arkansas	Yes							20.04	Rain
44	Nebraska	Yes							15.87	Rain
45	Kansas	Yes							14.35	Rain
46	California	Yes	No Hearings, Written Complaint to CA Dept of Insurance will take action if Co. not following the plan or regs, not a hearing on merits	N/A	State Plan: >$500.00 Sum of BI/PD/Coll & >50% at-fault; Co plan varies: For State Farm(#1 at 20.6%) >$600.00 PD for 2 car acc or same for coll in 1 car acc & >50% at-fault	2 Plan System: 1)CA Good Driver Disc; Acc w/ PD/Coll or min traf=1pt Acc w/BI or maj traf=2pt, 0-1pt -20% all cov & 2)Co plan; State Farm 1acc=3 levels=+50% all cov 2=6=140% 3=9=270% 1speed=2=28% DUI=8=230% Age 1 lev/inc free yr, 3yr w/o incid=-8% 6=-8%	Varies, For State Farm history continues until insured ages to level 1	135.71	Dry
47	Arizona	No						52.13	Dry	
48	New Mexico	Yes						23.66	Dry	
49	Nevada	Yes						21.04	Dry	
50	Idaho	Yes						17.51	Dry	
51	North Dakota	Yes						7.73	Dry	

[1] 1995 Summary of Selected State Laws and Regulations Relating to Automobile Insurance. American Insurance Association, 1130 Connecticut Ave. Ste. 1000, Wash., D.C. 20036 (1995).

[2] Insurance Issues Update. Insurance Information Institute, 110 Williams Street NY, NY 10038. (Oct. 1995).

[3] State Insurance Regulations, Telephone contact with State Divisions of Insurance or Dept. of Insurance, State Farm, and Allstate (Major Underwriters).

[4] Private Passenger Automobile Ins. State Av. Expenditures and Av. Premiums. NAIC, AAIS, ISO. (1994).

[5] Public Road and Street Mileage & Motor-Vehicle Registration. U.S. Dept. of Transportation, National Hwy. Traffic Safety Adminstration, Table SS93-16, November, 1994.

[6] Snow and Ice Pellets--Selected Cities & Normal Monthly and Annual Precipitation--Selected Cities. U.S. National Oceanic and Atmospheric Administration, Climatography of the U.S., No. 81 (1992 & 1990).

* Snow State ≥ 35 inches of snow in major city; Rain State ≥ 20 inches of rain in major city; Dry State < 20 inches of rain in major city.

Assisted by Christine Asimacos

MEMORANDUM

To: Ralph Iannaco, Deputy Commissioner and Chief of Staff

From: Joe Mulkern, Assistant General Counsel

Date: 7/19/96

RE: Encouraging consistent application of Division of Insurance Regulations and the Safe Drive Insurance Plan by companies writing auto insurance in Massachusetts.

A. The practice of inurers and claimants "settling" auto damage claims outside the Safe Driver Insurance Plan.

One of the objectives of the SDIP Task Force is to close the loophole that permits insureds and insurers to agree to settle at-fault claims for an amount that is below the threshold level that would otherwise trigger an SDIP surcharge. The Division strongly discourages such "settlement" practices since they are a means of manipulating the rating factors of auto insurance policies and are detrimental to both the automobile insurance industry and the drivers of Massachusetts as a whole. The short-term savings that companies and individuals experience by settling claims in this manner could eventually translate into long-term losses leading to higher premiums if this practice becomes widespread. Further, as insurers continue to turn a blind-eye to such violations, the SDIP's fundamental premise of encouraging safe driving is undermined.

The loophole that permits this practice is found at 211 CMR 132.05(1): "Within 20 working days of the payment of any Property Damage Liability claim in excess of the amounts specified...the Insurer shall report an At Fault Accident to the Merit Rating Board... ." By this language the insurer is only required to notify the MRB of an at-fault accident if it makes a payment of any at-fault claim in excess of the threshold amount, regardless of the actual cost to repair the damaged vehicle. Therefore, the at-fault insured can effectively "settle" with their insurer at an amount just slightly below the level that would trigger an SDIP surcharge. For instance, if the appraisal amount was $550 and the threshold for triggering an SDIP surcharge was $500, the claimant would contribute $60 to the cost of repair, thereby falling below the surcharge point by $10. There is a dual incentive in this arrangement in that the insurer will reduce the amount of its claim payments and the insured will avoid SDIP surcharges to their auto premium and the potential loss of their driver's license.

I recommend addressing this problem through the issuance of a Division of Insurance Bulletin wherein the Division's policy of discouraging such a practice is clearly stated and reasoned. We must ensure that there will be adequate funds in the system for the life of the Plan and that all participants receive equitable treatment in its administration. The practice of partial buybacks does not further these goals because permitting policyholders to beat the system results in having the penalty for reckless driving removed. Without a secure disincentive, the SDIP may be viewed by some policyholders as having no teeth. We must not permit an opportunity for risk-taking that would otherwise be avoided. The Bulletin, therefore, should stress the importance of the SDIP's primary mission of encouraging safe driving on the roadways of Massachusetts and following all motor vehicle laws. These objectives are mutually beneficial to insurers and drivers and can only be assured if there is voluntary and strict compliance by insurers with the policy of not allowing the partial buyback of claims.

B. Whether Insurance Companies should rely upon Board of Appeal Decisions when determining whether to refund deductibles to insureds with applicable coverage.

There presently exists some variance of opinion as to the effect that a Vacate Decision by the Board of Appeals has on an insurer's determination of whether to refund or waive the deductible under a policy with such coverage.

Introduction:

If an insured is successful in its appeal to the Division of Insurance of an insurer's initial determination that the insured was "at fault", the Board of Appeals will vacate the surcharge for having been applied "not in accordance with Chapt. 175, sec. 113P". A variance of opinion as to the effect of the Board's Vacate Decision has arisen in that some companies have interpreted the Vacate Decision to mean that the insured was not negligent and should therefore be entitled to recover against the other party who, necessarily, must have been the negligent party. Some companies will then proceed to refund deductibles based on the conclusion that the effect of a Vacate Decision by the Board is to satisfy criteria #4 in the endorsement (that the insured is entitled to recover in court against an identified person or some reason not mentioned above"). Although we do not wish to discourage insurers from refunding deductibles when appropriate, the Division advises that the conclusion mentioned above is erroneous and not in accordance with the terms of the auto policy.

Waiver of Deductible:

Under the Massachusetts Auto Policy an insured may be entitled to a waiver or reimbursement of their deductible if they have selected and paid for optional Collision or Limited Collision coverage and their policy contains a Waiver of Deductible

Endorsement in the case of Collision, or zero-deductible coverage in the case of Limited Collision. These endorsements require that the insurer absorb or reimburse the insured for any deductible if certain criteria are met. The criteria are set forth in the Auto Policy as follows:

1. The auto was legally parked when struck by another auto owned by an identified person,

2. the auto was struck in the rear by another auto owned by an identified person,

3. The operator of the other auto was convicted of either
   a) DUI
   b) Driving the wrong way on a one-way street, or
   c) Speeding, or

4. "the insured is entitled to recover in court against an identified person for some reason not mentioned above".

If the insured can prove one of these criteria, then the deductible is waived and the insurer must pay for the full cost of repairs.

Effect of a Vacate Decision by the Board:

When the BOA, in reversing an insurer's prior negligence determination, states that the appellant was **not more than 50% at fault**, it is not concluding that another driver must therefore be more than 50% at fault. It may simply be that the fault of the parties was 50/50 or that there were intervening causes so that neither party was more than 50% at fault. The Board's ruling does not and should not address the respective degree of fault attributable to each party in a multi-vehicle accident since the Board's function in such case is limited to determining whether a surcharge was properly applied in the first instance by the insurer. A surcharge is improperly applied if the insured was **not more that 50% at fault**, hence the limited scope of the ruling. Consequently, the Board is not stating that the insured/appellant or his insurer is necessarily entitled to recover in court against an identified person for "some other reason". Under a plain reading of the terms of the policy, it seems clear that criteria #4 would have to be proven by the insured before the insurer's obligation to refund the deductible is triggered. For reasons of administrative efficiency and goodwill, an insurer, nevertheless, is free to waive or refund a deductible based upon its own finding of the insured's degree of fault irrespective of the Boards Finding or whether the insured has in fact recovered damages against another party to the accident.

Conclusion:

The Division of Insurance encourages waiver and refund of deductibles when appropriate and in accordance with the Auto Policy and any applicable endorsements. The determination of whether a deductible should be waived or refunded, however, is not a function of the Board of Appeals. When the issue is raised, in order to promote a fair and consistent practice throughout the industry, it is the position of the Division of Insurance that the insurer follow the provisions contained in the Auto Policy and the endorsements that may apply. When making such determination, the insurer should look to the contract with its insured and the facts and circumstances of each case, not to the rulings of the Board of Appeals since a Vacate Decision is not determinative of whether the insured is entitled to recover in court against another person.

4. Age All w 1 MT--Combination of (2) and (3) above.

Sample Data

The MRB provided the SRB with a random sample of 1000 operator histories for the 1/1/90-12/31/95 surcharge period. Operators with less than the complete six year history, i.e., inexperienced operators, and operators with no incidents were excluded from the sample. The four data fields provided by the MRB included operator number (proxy for operator name), type of incident number (proxy for type of violation or at-fault accident), difference between actual speed and speed limit or dollar amount of fine (non-speeding violation) or amount of claim, and incident surcharge date. This data was provided to the SRB on diskette on May 24, 1996, and is shown in Appendix A.

In the MRB SDIP step data used in the determination of 1996 automobile insurance rates experienced operators (rating classes 10, 15, and 30) constituted 92% of all insureds. Approximately 53% of those experienced operators were at SDIP step 9. The average step for experienced operators at all steps in that data (including step 9) was 10.99. The average step for inexperienced operators was 14.86 in the same data. Given the average step result of 12.415 for the sample data under the current SDIP, the average step for all experienced operators under the current plan extrapolates to 10.61 if one assumes the sample represents 47% of the total experienced operator population.

Plan Option Analysis Results

The result for the four SDIP options on our MRB 1000 operator sample are shown in exhibit 1. The distributions by step are given here along with the average step for the 1000 operators. A graphic display of the distributions is shown in exhibit 2.

Current vs. Age All

The difference in average step for our sample between the current plan and the "age all" option is shown to be .9220 (12.415-11.493) steps. This difference reflects an average SDIP liability offset difference of approximately 4.6%[1], i.e., liability manual rates for all experienced operators would have to be increased approximately 4.6% over the current SDIP in order to keep the SDIP in balance. This result assumes that 53% of experienced operators would be at step 9. The corresponding increase in collision base rates would be approximately 2.9% under the same assumption and a 5% step differential.

The "age all" option included the elimination of the current three year clean slate rule. Twenty-two operators were subject to the current clean slate with a total decrease in points of 80 points or an average point decrease of 3.6 points. These clean slate operators had an average step of 15.591 under the current SDIP versus 13.455 under the "age all" option. Only one of the twenty-two operators was placed at a higher step under the "age all" option. Assuming the 1000 operators represent the same 47% share of the total experienced operator classes, then the clean slate currently comes into play for only 1% of the experienced operator classes.

Current vs. 1 MT Clean Slate

The difference in average step for our sample between the current plan and the "1 MT Clean Slate" option is shown to be .1600 (12.415-12.255) steps. This difference reflects an average SDIP

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[1] (12.415)(.47)+(9)(.53)=10.605 and (11.493)(.47)+(9)(.53)=10.172
[(1-(15-10.605)(.07)) / (1-(15-10.172)(.07))] - 1= 4.6%

liability offset difference of approximately 0.8%, i.e., liability manual rates for experienced operators would have to be increased approximately 0.8% in order to keep the SDIP in balance. This result assumes that 53% of experienced operators would be at step 9. The corresponding increase in collision base rates would be approximately 0.5% under the same assumption.

Current vs.Age All w 1 MT

This option would be the preferred choice if the "age all" option is determined to be a proper revision to the SDIP. It gives the constant movement for clean years from the "age all" option and eliminates the impact of the one minor traffic violation after three clean years. The liability manual rate impact of this option relative to the current SDIP is an increase of 5.85% for experienced operators.

Summary

The introduction of the "age all" option would result in a significant increase in the step 15 or manual rate. Experienced insureds at step 9 who represent a large percentage of all insureds (approximately 49% in 1996 rates) would receive an average 4.6% increase in SDIP liability rates if the SDIP were suddenly changed from the current plan to the "age all" option. The beneficiaries of this type of plan change would be those insureds who would have incidents to be aged, i.e., insureds above the lowest steps. In any change of this type to the SDIP it would be preferable to implement the change prospectively, i.e., to future incidents. This prospective implementation would phase-in any impacts to the manual rate. While inexperienced operators generally have worse driving records than experienced operators, it is not clear what the approximate impact would be on the higher step inexperienced operators.

One way to mitigate the effects of the introduction of an aging process in the SDIP would involve increasing the points assigned to all incidents. For example, an increase of 1 point per incident for all incidents under the "age all" option would result in an average step of 12.105 for the 1000 sample operators. This would translate to an SDIP liability manual rate increase of 1.5% for experienced operators. However, increases in points should be tied to the actuarially determined risk that operators with these type of incidents add to the insurance system. Points assigned to incidents should not be assigned in the absence of a reasonable foundation. Increases in points or point relativities are proper matters to be considered in the SDIP segment of the "fix & establish" rate hearings.

This type of point reassignment could also be difficult from a public relations standpoint. There would need to be some public education regarding the interaction of a new point system and the aging process to demonstrate the superior equity of the revised SDIP. This is not the type of system change that should occur without a public notification. Changes to the SDIP could be made known to the public through a one page notice sent out with the renewal application, statement of facts, or coverage selection page.

The introduction of the "1MT Clean Slate" along with the elimination of the current three year clean slate appears to be relatively painless. Given the 1% of experienced operators that benefit from the three year clean slate, there would be no great loss if this were eliminated in the future. This was initially implemented to ensure credit expectations were met when the SDIP changed to a "bonus-malus" system in 1990. It makes more sense from a public policy perspective to go easy on someone for their first minor offense, than to modify incident impacts for repeat offenders.

; "1 MT Clean Slate" change relates to the issue that has generated the most complaints from the rrent SDIP. One minor traffic incident stays on an operator's record for six years. The operator ays at the same step for the full six years. This goes against the fundamental concept of the system, ., good driving experience should lead to lower rates. The lower rates act as a positive inforcement to continue good driving behavior. Six years is too long to wait for this positive inforcement. Three years would be more reasonable. This change would be an easy sell to the ıblic with significantly less manual rate impact than the "age all" proposal.

ıe SRB will continue to provide support as needed for the many proposals that come before the ask Force. I feel it is important to reinforce the idea that any changes to the point and step structure the current SDIP which move beyond the consideration stage should be tested by the MRB on the ɔmplete operator history data base. It is my understanding that considerable lead time is required for ·ogramming in these situations.

you have any questions on any of the issues raised by the memorandum, please contact me at (617) 21-7336.*

* Research data available upon request

DISTRIBUTIONS BY STEP FOR SDIP TASK FORCE REVIEW OPTIONS
SOURCE: DIVISION OF INSURANCE

CURRENT–1996 SDIP PLAN.

1 MT (MINOR TRAFFIC) CLEAN SLATE–1 MT VIOLATION IN 6 YR. PERIOD DISAPPEARS AFTER 3 CLEAN YEARS.

AGE ALL–EACH INCIDENT WOULD DECREASE 1 PT. FOR EACH SUBSEQUENT CLEAN YEAR.

AGE ALL w 1 MT CLEAN SLATE–COMBINATION OF TWO PRECEDING OPTIONS.

STEP	CURRENT	1 MT CLEAN SLATE	AGE ALL	AGE ALL w 1 MT CLEAN SLATE
9	0	240	0	240
10	514	274	572	332
11	45	45	113	113
12	29	29	83	83
13	136	136	76	76
14	90	81	53	53
15	60	52	30	30
16	25	29	23	23
17	18	24	17	17
18	22	24	3	3
19	12	13	9	9
20	14	13	7	7
21	8	9	4	4
22	6	7	4	4
23	2	3	1	1
24	3	3	2	2
25	2	3	0	0
26	3	3	1	1
27	0	0	0	0
28	3	3	1	1
29	0	0	0	0
30	3	3	0	0
31	0	0	0	0
32	0	0	0	0
33	0	0	0	0
34	1	2	0	0
35	4	4	1	1
ALL	1000	1000	1000	1000
AVE STEP	12.415	12.255	11.493	11.253

SDIP TASK FORCE REVIEW OPTION DISTRIBUTIONS BY STEP

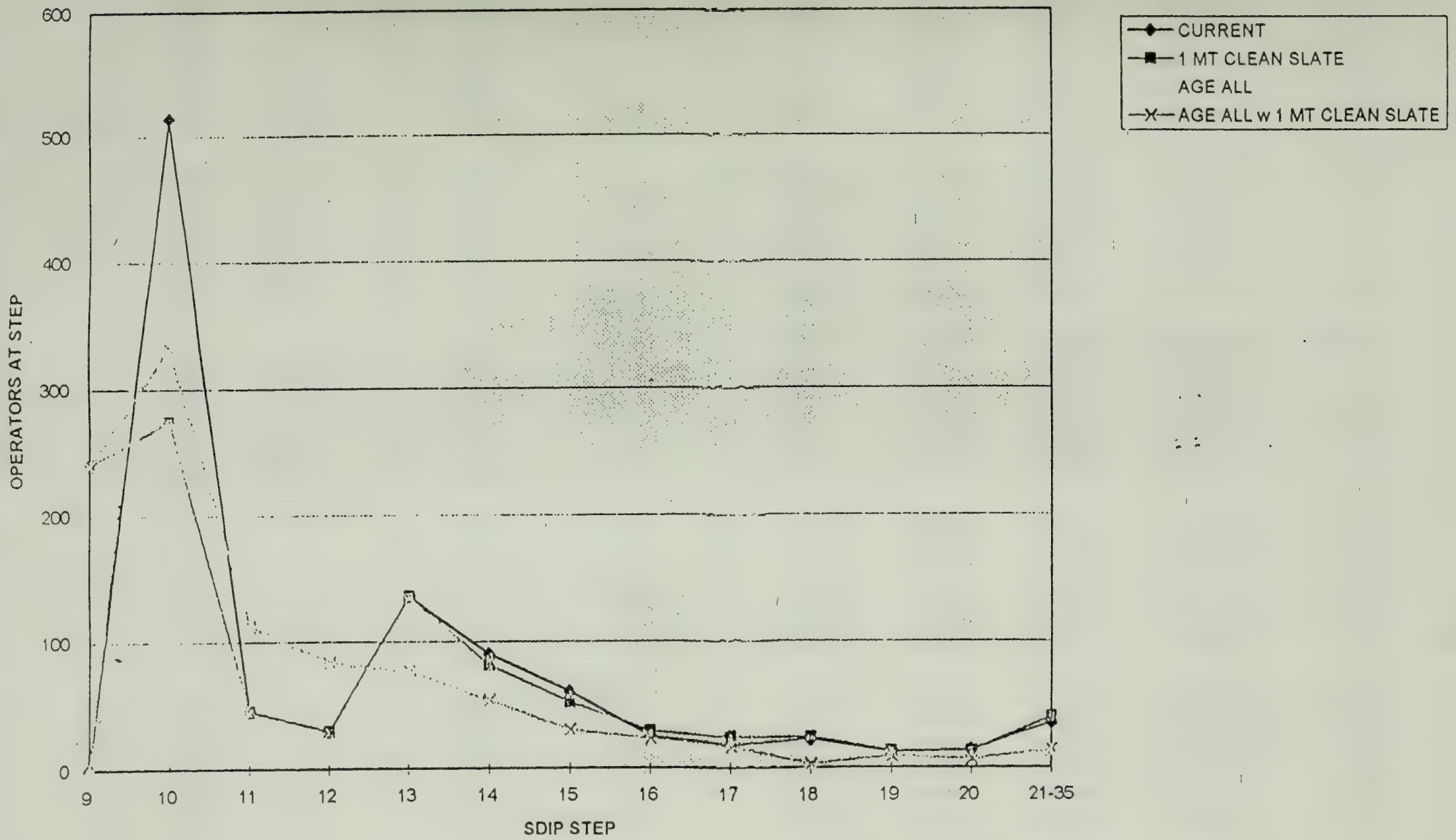

Table 10. PROPERTY DAMAGE LIABILITY
PRIVATE PASSENGER AUTO VOLUNTARY BUSINESS
PURE PREMIUM, FREQUENCY, AND SEVERITY BY STATE
1986-1990

STATE	YEAR	INCURRED LOSSES	EARNED EXPOSURES	INCURRED CLAIMS	PURE PREMIUM	RANK	STATE/CW	FREQUENCY	RANK	STATE/CW	AVERAGE LOSS	RANK	STATE/CW
Maryland	1986	152,295,764	2,315,968	110,832	65.76	6	1.21	4.79	10	1.09	1,374.11	10	1.12
	1987	164,370,008	2,367,188	108,694	69.44	6	1.21	4.59	11	1.07	1,512.23	8	1.13
	1988	174,105,521	2,392,182	114,143	72.78	6	1.22	4.77	8	1.10	1,525.33	8	1.11
	1989	186,638,190	2,441,073	119,456	76.46	5	1.20	4.89	8	1.12	1,562.40	13	1.07
	1990	178,950,516	2,511,205	113,407	71.26	12	1.13	4.52	13	1.07	1,577.95	12	1.05
	TOTAL	856,359,999	12,027,616	566,532	71.20	7	1.19	4.71	9	1.09	1,511.58	9	1.09
Massachusetts	1986	294,836,034	3,103,795	247,643	94.99	1	1.75	7.98	1	1.81	1,190.57	26	0.97
	1987	333,049,673	3,222,146	268,128	103.36	1	1.79	8.32	1	1.94	1,242.13	33	0.93
	1988	341,553,052	3,287,772	263,567	103.89	1	1.74	8.02	1	1.84	1,295.89	29	0.95
	1989	348,978,833	3,314,021	262,210	105.30	1	1.66	7.91	1	1.81	1,330.91	32	0.91
	1990	337,594,173	3,316,274	251,766	101.80	1	1.61	7.59	1	1.80	1,340.90	36	0.89
	TOTAL	1,656,011,765	16,244,008	1,293,314	101.95	1	1.70	7.96	1	1.84	1,280.44	31	0.93
Michigan	1986	18,168,994	4,009,769	21,976	4.53	51	0.08	0.55	51	0.12	826.77	50	0.67
	1987	20,027,895	4,084,788	22,991	4.90	51	0.09	0.56	51	0.13	871.12	51	0.65
	1988	21,594,711	4,441,967	25,612	4.86	51	0.08	0.58	51	0.13	843.15	51	0.62
	1989	22,257,945	4,452,765	24,863	5.00	51	0.08	0.56	51	0.13	895.22	51	0.62
	1990	20,568,237	4,451,974	23,259	4.62	51	0.07	0.52	51	0.12	884.31	51	0.59
	TOTAL	102,617,782	21,441,263	118,701	4.79	51	0.08	0.55	51	0.13	864.51	51	0.63
Minnesota	1986	88,312,276	2,066,746	85,525	42.73	42	0.79	4.14	35	0.94	1,032.59	41	0.84
	1987	98,734,635	2,180,505	86,394	45.28	42	0.79	3.96	36	0.92	1,142.84	41	0.85
	1988	112,741,014	2,303,872	99,842	48.94	38	0.82	4.33	21	1.00	1,129.19	40	0.82
	1989	125,305,370	2,322,979	104,551	53.94	38	0.85	4.50	18	1.03	1,198.51	40	0.82
	1990	117,193,018	2,318,885	93,656	50.54	41	0.80	4.04	31	0.96	1,251.31	42	0.83
	TOTAL	542,286,313	11,192,987	469,968	48.45	41	0.81	4.20	27	0.97	1,153.88	39	0.83
Mississippi	1986	45,075,409	939,581	35,805	47.97	36	0.88	3.81	45	0.86	1,258.91	19	1.02
	1987	47,180,747	950,108	34,590	49.66	37	0.86	3.64	44	0.85	1,364.00	20	1.02
	1988	45,174,963	954,938	34,483	47.31	41	0.79	3.61	46	0.83	1,310.06	27	0.96
	1989	50,611,986	988,506	36,360	51.20	41	0.81	3.68	46	0.84	1,391.97	26	0.96
	1990	53,388,918	1,023,950	37,232	52.14	38	0.82	3.64	43	0.86	1,433.95	26	0.96
	TOTAL	241,432,023	4,857,083	178,470	49.71	39	0.83	3.67	44	0.85	1,352.79	24	0.98

PRIVATE PASSENGER NON-FLEET AUTOMOBILE LIABILITY

20 - MASSACHUSETTS

PROPERTY DAMAGE

Yr End	Qtr	Earned Years	No of Paid Claims	Paid Losses	Paid Claim Freq	Pct. Change From Qtr. Prior Year	Avg. Loss	Pct. Change From Qtr. Prior Year	Pure Prem.	Pct. Change From Qtr. Prior
1992	4TH	791,788	52,915	$71,638,165	6.68		$1,354		$90.48	
1993	1ST	771,941	51,019	$69,325,362	6.61		$1,359		$89.81	
1993	2ND	762,018	50,937	$68,952,969	6.68		$1,354		$90.49	
1993	3RD	757,900	50,365	$68,640,469	6.65		$1,363		$90.57	
1993	4TH	757,782	49,710	$68,267,073	6.56	-1.8	$1,373	1.4	$90.09	-0.4
1994	1ST	761,379	49,756	$68,944,612	6.54	-1.1	$1,386	2.0	$90.55	0.8
1994	2ND	763,998	49,874	$70,231,210	6.53	-2.3	$1,408	4.0	$91.93	1.6
1994	3RD	766,299	50,351	$71,626,795	6.57	-1.1	$1,423	4.4	$93.47	3.2
1994	4TH	768,548	51,256	$73,704,553	6.67	1.7	$1,438	4.7	$95.90	6.5
1995	1ST	770,767	52,037	$76,024,933	6.75	3.3	$1,461	5.4	$98.64	8.9
1995	2ND	769,998	50,975	$75,646,228	6.62	1.4	$1,484	5.4	$98.24	6.9
1995	3RD	768,373	50,438	$75,498,827	6.56	-0.1	$1,497	5.2	$98.26	5.1
1995	4TH	765,974	50,212	$76,504,174	6.56	-1.7	$1,524	6.0	$99.88	4.1
1996	1ST	763,415	49,751	$77,189,630	6.52	-3.5	$1,552	6.2	$101.11	2.5
1996	2ND	757,932	50,566	$79,306,763	6.67	0.8	$1,568	5.7	$104.64	6.5
1996	3RD	754,692	50,958	$81,466,632	6.75	2.9	$1,599	6.8	$107.95	9.9
1996	4TH	750,398	50,219	$81,298,588	6.69	2.1	$1,619	6.2	$108.34	8.5
1997	1ST	743,227	50,049	$82,110,765	6.73	3.3	$1,641	5.7	$110.48	9.3

Losses exclude all loss adjustment expenses.

National Association of Independent Insurers
Insurance Services Office, Inc.
National Independent Statistical Service

FAST TRACK MONITORING SYSTEM

PRIVATE PASSENGER NON-FLEET AUTOMOBILE LIABILITY

90 - COUNTRYWIDE

PROPERTY DAMAGE

Yr End	Qtr	Earned Years	No of Paid Claims	Paid Losses	Paid Claim Freq	Pct. Change From Qtr. Prior Year	Avg. Loss	Pct. Change From Qtr. Prior Year	Pure Prem.	Pct. Change From Qtr. Prior
1992	4TH	81,167,577	3,073,703	$4,632,522,979	3.79		$1,507		$57.07	
1993	1ST	81,632,622	3,098,602	$4,718,983,699	3.80		$1,523		$57.81	
1993	2ND	82,089,498	3,128,690	$4,815,721,321	3.81		$1,539		$58.66	
1993	3RD	82,517,274	3,164,837	$4,935,667,550	3.84		$1,560		$59.81	
1993	4TH	82,899,192	3,186,980	$5,037,841,675	3.84	1.5	$1,581	4.9	$60.77	6.5
1994	1ST	83,309,555	3,247,866	$5,197,670,111	3.90	2.7	$1,600	5.1	$62.39	7.9
1994	2ND	83,753,716	3,281,675	$5,334,256,578	3.92	2.8	$1,625	5.6	$63.69	8.6
1994	3RD	84,330,376	3,319,520	$5,477,618,744	3.94	2.6	$1,650	5.8	$64.95	8.6
1994	4TH	84,911,234	3,365,833	$5,642,461,023	3.96	3.1	$1,676	6.0	$66.45	9.3
1995	1ST	85,518,244	3,370,618	$5,775,566,443	3.94	1.1	$1,714	7.1	$67.54	8.2
1995	2ND	86,076,388	3,396,880	$5,922,008,083	3.95	0.7	$1,743	7.3	$68.80	8.0
1995	3RD	86,470,845	3,407,444	$6,040,684,043	3.94	0.1	$1,773	7.5	$69.86	7.5
1995	4TH	86,882,674	3,439,848	$6,198,123,540	3.96	-0.1	$1,802	7.5	$71.34	7.4
1996	1ST	87,246,760	3,505,193	$6,392,872,517	4.02	1.9	$1,824	6.4	$73.27	8.5
1996	2ND	87,612,133	3,538,034	$6,519,338,438	4.04	2.3	$1,843	5.7	$74.41	8.2
1996	3RD	88,051,405	3,578,685	$6,659,222,758	4.06	3.1	$1,861	5.0	$75.63	8.3
1996	4TH	88,468,023	3,598,557	$6,756,918,152	4.07	2.7	$1,878	4.2	$76.38	7.1
1997	1ST	88,863,596	3,576,515	$6,802,011,936	4.02	0.2	$1,902	4.3	$76.54	4.5

Losses exclude all loss adjustment expenses.
Coverage excludes New Jersey.

FORM-FT01

Massachusetts Private Passenger Automobile
PDL, Basic ($5000) Limits
All Companies

Part 1A: Development of Reported Incurred Losses

Calendar/ Accident Year	First Report	Second Report	Third Report	Fourth Report	Fifth Report
1983	166,213,181	178,409,118	182,046,757	183,805,688	183,701,935
1984	188,435,689	205,361,252	211,335,750	213,814,742	214,060,805
1985	213,001,101	236,062,565	245,661,051	249,524,054	249,844,497
1986	230,712,265	257,962,248	270,941,665	275,500,645	275,556,743
1987	256,017,925	289,655,656	304,360,117	308,385,377	308,888,208
1988	262,879,417	294,758,864	303,913,026	307,221,855	307,274,563
1989	270,434,546	297,298,668	303,302,971	305,064,873	305,304,144
1990	266,091,164	280,344,266	284,636,474	285,794,790	285,924,618
1991	245,224,689	256,450,577	259,258,455	259,910,013	259,955,686
1992	255,272,290	263,087,688	265,833,274	266,845,202	266,853,301
1993	272,924,629	281,143,014	285,013,377	285,679,487	
1994	298,055,010	304,800,667	306,781,854		
1995	312,467,244	322,918,271			
1996	354,699,891				

Part 1B: Development of Reported Claims

Calendar/ Accident Year	First Report	Second Report	Third Report	Fourth Report	Fifth Report
1983	189,276	204,183	207,835	209,506	209,484
1984	197,010	213,443	219,366	221,483	221,595
1985	205,841	225,959	234,086	237,084	237,270
1986	210,902	233,525	244,132	247,470	247,589
1987	226,639	252,685	264,426	267,260	267,544
1988	223,436	248,507	255,284	257,333	257,323
1989	222,005	242,447	246,402	247,405	247,491
1990	217,490	227,899	230,154	230,776	230,773
1991	203,011	209,817	211,423	211,728	211,728
1992	207,212	211,932	213,219	213,714	213,729
1993	216,432	220,588	222,446	222,724	
1994	227,632	231,210	232,068		
1995	228,716	234,017			
1996	250,937				

Part 1C: Earned Exposures

Calendar/ Accident Year	Earned Exposures
1983	2,782,997
1984	2,877,628
1985	2,980,029
1986	3,103,795
1987	3,222,146
1988	3,287,772
1989	3,314,021
1990	3,316,274
1991	3,266,467
1992	3,275,248
1993	3,305,206
1994	3,349,390
1995	3,407,612
1996	3,485,422

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Part 1D: Average Claim Cost (1A/1B)

Calendar/ Accident Year	First Report	Second Report	Third Report	Fourth Report	Fifth Report
1983	878	874	876	877	877
1984	956	962	963	965	966
1985	1,035	1,045	1,049	1,052	1,053
1986	1,094	1,105	1,110	1,113	1,113
1987	1,130	1,146	1,151	1,154	1,155
1988	1,177	1,186	1,190	1,194	1,194
1989	1,218	1,226	1,231	1,233	1,234
1990	1,223	1,230	1,237	1,238	1,239
1991	1,208	1,222	1,226	1,228	1,228
1992	1,232	1,241	1,247	1,249	1,249
1993	1,261	1,275	1,281	1,283	
1994	1,309	1,318	1,322		
1995	1,366	1,380			
1996	1,414				

Part 1E: Claim Frequency (1B)/(1C) x 100

Calendar/ Accident Year	First Report	Second Report	Third Report	Fourth Report	Fifth Report
1983	6.801	7.337	7.468	7.528	7.527
1984	6.846	7.417	7.623	7.697	7.701
1985	6.907	7.582	7.855	7.956	7.962
1986	6.795	7.524	7.866	7.973	7.977
1987	7.034	7.842	8.207	8.294	8.303
1988	6.796	7.559	7.765	7.827	7.827
1989	6.699	7.316	7.435	7.465	7.468
1990	6.558	6.872	6.940	6.959	6.959
1991	6.215	6.423	6.473	6.482	6.482
1992	6.327	6.471	6.510	6.525	6.526
1993	6.548	6.674	6.730	6.739	
1994	6.796	6.903	6.929		
1995	6.712	6.867			
19[illegible]	7.200				

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CHARLESTOWN, MASS.